

RECLAMATION

Managing Water in the West

Central California Area Office Building Replacement Project

Draft Environmental Assessment and Draft
Finding of No Significant Impact



U.S. Department of the Interior
Bureau of Reclamation

January 2009

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitment to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Central California Area Office Building Replacement Project

Draft Environmental Assessment and Draft Finding of No
Significant Impact

Prepared by:

CDM



**U.S. Department of the Interior
Bureau of Reclamation**

January 2009

Contents

	Page
Chapter 1 Introduction.....	1-1
1.1 Project Background	1-1
1.2 Purpose and Need.....	1-1
1.3 Project Location	1-2
1.4 Applicable Laws, Regulations, and Executive Orders	1-2
1.5 Decisions to be Made	1-4
1.6 Document Organization	1-4
Chapter 2 Proposed Action	2-1
2.1 No Action Alternative	2-1
2.2 Proposed Action	2-1
2.2.1 Phase 1 CCAO Maintenance Center	2-4
2.2.2 Phase 2 CCAO Administration Building	2-5
2.2.3 Construction Schedule	2-5
Chapter 3 Affected Environment and Environmental Consequences	3-1
3.1 Environmental Consequences Analysis	3-1
3.1.1 Resources Analyzed in Detail	3-1
3.1.2 Resources Not Analyzed in Detail	3-1
3.1.3 Cumulative Analysis	3-2
3.2 Water Resources.....	3-3
3.2.1 Regulatory Setting.....	3-3
3.2.2 Affected Environment.....	3-5
3.2.3 Environmental Consequences	3-5
3.2.4 Minimization Measures.....	3-6
3.2.5 Cumulative Effects.....	3-6
3.3 Air Quality.....	3-6
3.3.1 Regulatory Setting.....	3-7
3.3.2 Affected Environment.....	3-10
3.3.3 Environmental Consequences	3-11
3.3.4 Minimization Measures.....	3-13
3.3.5 Cumulative Effects.....	3-13
3.4 Biological Resources	3-14
3.4.1 Regulatory Setting.....	3-14
3.4.2 Affected Environment.....	3-15
3.4.3 Environmental Consequences	3-24
3.4.4 Minimization Measures.....	3-27
3.4.5 Cumulative Effects.....	3-31
3.5 Geology and Soils	3-32
3.5.1 Regulatory Setting.....	3-32
3.5.2 Affected Environment.....	3-33

Central California Area Office Building Replacement Project
Environmental Assessment

3.5.3	Environmental Consequences	3-33
3.5.4	Minimization Measures.....	3-33
3.5.5	Cumulative Effects	3-33
3.6	Visual Resources	3-34
3.6.1	Regulatory Setting.....	3-34
3.6.2	Affected Environment.....	3-34
3.6.3	Environmental Consequences	3-34
3.6.4	Minimization Measures.....	3-35
3.6.5	Cumulative Effects	3-35
3.7	Transportation and Circulation.....	3-36
3.7.1	Regulatory Setting.....	3-36
3.7.2	Affected Environment.....	3-37
3.7.3	Environmental Consequences	3-47
3.7.4	Minimization Measures.....	3-52
3.7.5	Cumulative Effects	3-52
3.8	Noise.....	3-53
3.8.1	Regulatory Setting.....	3-53
3.8.2	Affected Environment	3-61
3.8.3	Environmental Consequences	3-64
3.8.4	Minimization Measures.....	3-68
3.8.5	Cumulative Effects	3-68
3.9	Cultural Resources	3-68
3.9.1	Regulatory Setting.....	3-68
3.9.2	Affected Environment.....	3-69
3.9.3	Environmental Consequences	3-69
3.9.4	Minimization Measures.....	3-70
3.9.5	Cumulative Effects	3-70
3.10	Public Services and Utilities	3-70
3.10.1	Regulatory Setting.....	3-71
3.10.2	Affected Environment.....	3-71
3.10.3	Environmental Consequences	3-71
3.10.4	Minimization Measures.....	3-72
3.10.5	Cumulative Effects	3-73
3.11	Public Health and Safety	3-73
3.11.1	Regulatory Setting.....	3-73
3.11.2	Affected Environment.....	3-75
3.11.3	Environmental Consequences	3-76
3.11.4	Minimization Measures.....	3-77
3.11.5	Cumulative Effects	3-79
3.12	Minimization Measures Incorporated into the Project.....	3-79

Chapter 4 Consultation and Coordination	4-1
4.1 Consultation and Coordination.....	4-1
4.2 Distribution List	4-2
4.3 Public Involvement	4-2
Chapter 5 Draft Finding of No Significant Impact	5-1
Chapter 6 List of Preparers.....	6-1
Chapter 7 References	7-1

Tables

Table 1-1	Potential Regulatory Requirements for the CCAO Building Replacement Project	1-3
Table 2-1	CCAO Building Replacement Project Schedule	2-6
Table 3.1-1	Cumulative Projects.....	3-3
Table 3.3-1	National Ambient Air Quality Standards.....	3-8
Table 3.3-2	NAAQS Attainment Status (Sacramento County).....	3-8
Table 3.3-3	General Conformity de minimis Thresholds for Sacramento County	3-10
Table 3.3-4	2006 Emissions Inventory for Sacramento County	3-11
Table 3.3-5	Summary of Air Pollutant Monitoring Data in Sacramento	3-12
Table 3.3-6	Unmitigated Construction Impacts (Air Quality)	3-13
Table 3.3-7	Unmitigated Operations Impacts (Air Quality)	3-13
Table 3.4-1	Special Status Species and Critical Habitat Summary.....	3-19
Table 3.4-2	Valley Elderberry Shrub Stem Counts.....	3-25
Table 3.4-3	Valley Elderberry Shrub Mitigation	3-26
Table 3.7-1	Local and Regional LOS Standards and Thresholds	3-37
Table 3.7-2	Direct Access Routes to CCAO Building Replacement Site.....	3-38
Table 3.7-3	Existing Roadway Segment Traffic Volume Data	3-44
Table 3.7-4	Existing Intersection LOS (2004)	3-45
Table 3.7-5	Projected Future Traffic Volume Conditions (2008).....	3-45
Table 3.7-6	Accident History – Corridor Collision Rate	3-47
Table 3.7-7	Functional Class and Daily Roadway Segment LOS Threshold ..	3-48
Table 3.7-8	Signalized Intersection LOS Criteria.....	3-48
Table 3.7-9	Construction Phases and Time for Completion	3-50
Table 3.7-10	Construction Impacts to ADT and LOS on Auburn Folsom Road	3-51
Table 3.7-11	Roadway Significant Effects, Post-Bridge Operation	3-53
Table 3.8-1	Federal Highway Administration Noise Abatement Criteria	5-54
Table 3.8-2	Noise Compatible Land Use Planning.....	3-56
Table 3.8-3	Local Government Transportation Noise Standards.....	3-57

Table 3.8-4	Placer County Sound Level Standards.....	3-58
Table 3.8-5	Placer County Non-Transportation Noise Standards, dBA	3-58
Table 3.8-6	Sacramento County Non-Transportation Noise Standards	3-59
Table 3.8-7	City of Folsom Exterior Noise Level Standards, dBA	3-59
Table 3.8-8	City of Folsom Interior Noise Level Standards, dBA	3-59
Table 3.8-9	Summary of Vibration Levels on Humans and Buildings	3-60
Table 3.8-10	Average Ambient Noise Levels for Various Land Uses.....	3-63
Table 3.8-11	Noise Sensitive Receptor Sites, Existing Conditions	3-64
Table 3.12-1	Summary of Environmental Consequences and Minimization Measures	3-80
Table 6-1	List of Preparers	6-1
Table 6-2	List of Contributors.....	6-1

Figures

Figure 1-1	Folsom Reservoir	1-2
Figure 2-1	Proposed Action.....	2-2
Figure 2-2	Buildings to be Removed under the Proposed Action	2-3
Figure 3.4-1	Elderberry Map	3-22
Figure 3.7-1	Project Area Roadways and Intersections	3-40
Figure 3.8-1	Noise Sensitive Receptor Sites	3-66

Acronyms and Abbreviations

ADT	average daily trips
APE	Area of Potential Effect
ARWEC	American River Water Education Center
BMP	best management practice
BRP	Building Replacement Project
CAA	Clean Air Act
CARB	California Air Resources Board
CCAO	Central California Area Office
CDFG	California Department of Fish and Game
CDPR	California Department of Parks and Recreation
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
Corps	U.S. Army Corps of Engineers
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel scale
DOT	Department of Transportation
DPR	California Department of Parks and Recreation
DS/FDR	Dam Safety and Flood Damage Reduction
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
ENSA	Environmental Assessment (for toxics)
E.O.	Executive Order
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FLSRA	Folsom Lake State Recreation Area
FONSI	Finding of No Significant Impact
g/VMT	gallons per vehicle miles traveled
HCM	Highway Control Manual
HMTA	Hazardous Materials Transportation Act
HMVM	Hundred million vehicle miles
ITA	Indian Trust Asset

Central California Area Office Building Replacement Project
Environmental Assessment

lbs	pounds
lbs/day	pounds per day
L/CNEL	Maximum noise limit
L _{dn}	Day-night noise level
LEED	Leadership in Engineering and Environmental Design
L _{eq}	Equivalent Noise Level
L _{max}	Maximum noise level
LOS	level of service
µg/L	microgram per liter
µg/m ³	microgram per cubic meter
mph	miles per hour
NAAQS	National Ambient Air Quality Standard
NAC	Noise Abatement Criteria
NAGPRA	Native American Graves Protection and Repatriation Act
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Record of Historic Places
O ₃	ozone
O&M	operations and maintenance
PM _{2.5}	particles less than 2.5 micrometers
PM ₁₀	particles of 10 micrometers or less
ppmv	parts per million per volume
PPV	Peak Particle Velocity
RCRA	Resource Conservation and Recovery Act
Reclamation	United States Department of the Interior, Bureau of Reclamation
ROG	Reactive organic gases
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendment Reauthorization Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO ₂	sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
tpy	tons per year
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

USGBC	United States Green Building Council
V/C	volume to capacity
VELB	valley elderberry longhorn beetle
VOC	volatile organic carbon

This page left intentionally blank.

Chapter 1

Introduction

This document is an Environmental Assessment (EA) for the Central California Area Office (CCAO) Building Replacement Project (BRP) that has been prepared by the U.S Department of the Interior, Bureau of Reclamation (Reclamation) to satisfy the requirements of the National Environmental Policy Act (NEPA) and the Council of Environmental Quality's Regulations for Implementing Procedural Provisions of NEPA (40 CFR¹ §1500-1508).

The document describes the affected environment and the potential direct, indirect, and cumulative effects related to construction of the CCAO BRP. This document also identifies measures that have been incorporated into the design of the project to minimize or avoid project-related impacts.

1.1 Project Background

Located at Folsom Dam, 23 miles east of Sacramento, California, the Reclamation CCAO Headquarters manages water and land resources in 12 different counties in northern California. Major project lands managed by Reclamation include Folsom Reservoir, Lake Berryessa, New Melones, and Auburn. Due to the poor condition, age, security, and inadequacy of the facilities at the CCAO Headquarters complex, Reclamation is proposing to replace the majority of the buildings. The current buildings are 60 years old, with the exception of several trailers which are 40 years old. The buildings do not meet current building standards or security needs. The proposed project would remove approximately 15 existing buildings of various sizes and consolidate the operations associated with them through the construction of two new facilities on adjacent CCAO property. The locations proposed for the new facilities were selected so that construction would not interrupt on-going CCAO operations and maintenance (O&M) activities. Proposed sites were also selected to reduce environmental impacts as much as possible by concentrating development in areas currently used for maintenance and storage.

1.2 Purpose and Need

The purpose of the project is to construct new administrative and maintenance facilities to meet the current needs of the Reclamation CCAO Headquarters complex in Folsom, California. There is a need to upgrade CCAO Headquarter facilities because of the poor condition, age, security, and inadequacy of the existing facilities.

¹ CFR = Code of Federal Regulations

1.3 Project Location

Reclamation's CCAO Headquarters complex is located at Folsom Dam in Sacramento County, California. Reclamation owns the lands at the CCAO complex. All lands in the study area are Federally-owned with adjacent land currently leased to the California Department of Parks and Recreation (CDPR). Figure 1-1 shows the location of Folsom Reservoir in central California.

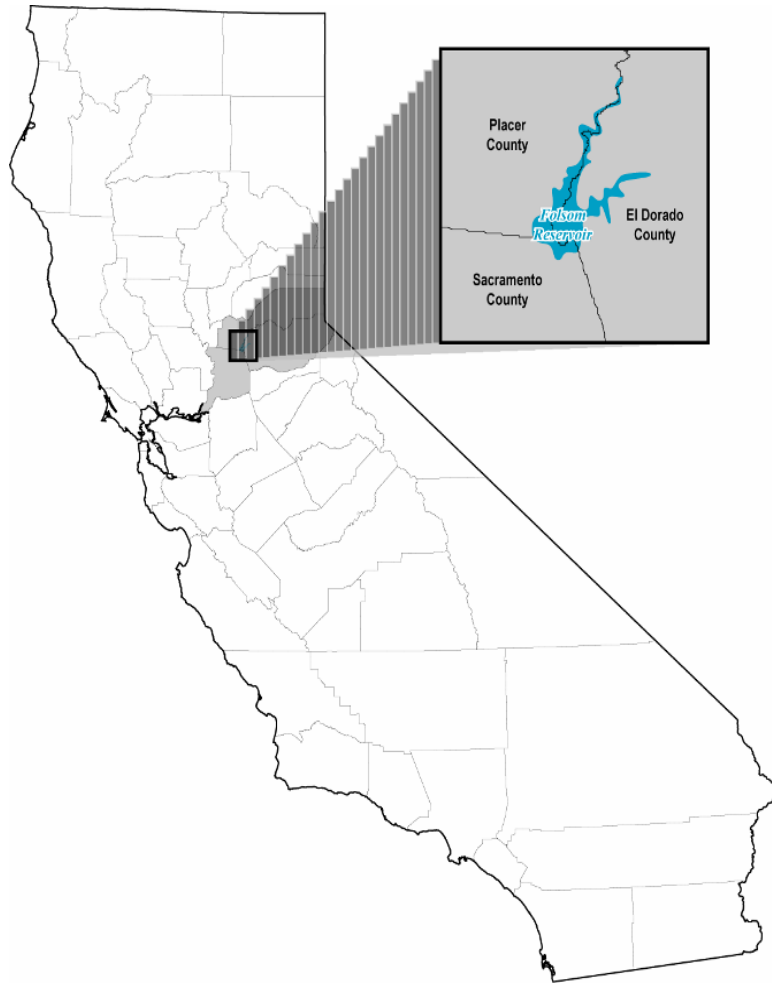


Figure 1-1
Folsom Reservoir

1.4 Applicable Laws, Regulations, and Executive Orders

The CCAO BRP must comply with the laws, regulations, and executive orders listed in the table below. Descriptions of these regulatory requirements can be found under each resource discussion in Chapter 3.

Table 1-1. Potential Regulatory Requirements for the CCAO Building Replacement Project

Law, Regulation, Executive Order, or Local Ordinance	Method of Compliance
National Environmental Protection Act	EA
Endangered Species Act	Section 7 Consultation with USFWS
Clean Water Act	401, 402, and 404 Permits
Porter-Cologne Water Quality Control Act	EA
Migratory Bird Treaty Act	EA
E.O 12898 Environmental Justice	EA
E.O 11990 Protection of Wetlands	EA
Clean Air Act	EA
National Historic Preservation Act	Section 106 Consultation with SHPO
Indian Trust Assets	EA
Hazardous Materials Transportation Act	EA
40 CFR 301 et seq. Emergency Planning and Community Right to Know Programs	EA
40 CFR 260-279 Management of Hazardous Waste	EA
California Department of Motor Vehicles, Hazardous Waste and Materials Transportation Requirements (Vehicle Code Section 31303)	EA
California Endangered Species Act	EA
California Fish and Game Code §2050-2098	EA
Natural Community Conservation Planning Act	EA
Porter-Cologne Water Quality Control Act	EA
Native Plant Protection Act; California Fish and Game Code §1900 et seq	EA
California Fish and Game Code §3503	EA
California Fish and Game Code §1930-1933	EA
California Fish and Game Code §3511 and 5050	EA
Sacramento County Noise Standards	EA
City of Folsom Noise Standards	EA

SHPO = State Historic Preservation Officer;
EA = Environmental Assessment
USFWS = U.S. Fish and Wildlife Service

CFR = Code of Federal Regulations
E.O = Executive Order

1.5 Decisions to be Made

The results of this EA will determine whether a Finding of No Significant Impact (FONSI) can be issued or if additional environmental review such as an Environmental Impact Statement is required.

1.6 Document Organization

The remainder of this document is organized as follows:

- **Chapter 2** – presents the No Action Alternative and the Proposed Action analyzed in this EA;
- **Chapter 3** – describes the affected environment and analyses the effects of the alternatives according to NEPA;
- **Chapter 4** – describes the consultation and coordination that occurred during the development of this document and describes document distribution and public involvement;
- **Chapter 5** – presents the draft FONSI;
- **Chapter 6** – presents the list of preparers; and
- **Chapter 7** – presents the list of references.

Chapter 2

Proposed Action

This chapter describes the alternatives analyzed in this EA; the No Action Alternative and the Proposed Action.

2.1 No Action Alternative

For the purposes of impact analyses, environmental documents must compare a No Action Alternative with that of the Proposed Action. The No Action Alternative examines the future without project conditions, that is, the future if the Proposed Action is not implemented or constructed.

Under the No Action Alternative, no new buildings would be constructed at the CCAO Headquarters. Reclamation staff would continue to use the existing buildings and trailers. These facilities would not meet current security requirements and would require expensive maintenance and upgrades to bring them up to current building standards.

2.2 Proposed Action

The Proposed Action involves the replacement of existing maintenance and administrative facilities at the CCAO Headquarters in Folsom, California, in order to provide a safe, secure, accessible, and efficient site environment for CCAO staff and visitors. Two new buildings would be constructed; a Maintenance Center and an Administration Building (See Figure 2-1). The new buildings would be sited to work with existing topography, paved areas, and roads to minimize earthwork, demolition, and construction costs. Ample space would be provided for access of firefighting equipment. Approximately 15 existing buildings and trailers of various sizes would need to be removed prior to construction (See Figure 2-2). All salvageable materials from the old buildings would be reused or recycled; any remaining buildings would be disposed of or turned over to other agencies. Two new parking lots would be created to support Reclamation staff and visitors at the Administration Building, and the access road to the Maintenance Center would be re-graded and paved to meet current California Department of Transportation (Caltrans) standards. The Proposed Action would be implemented in two phases, described below.

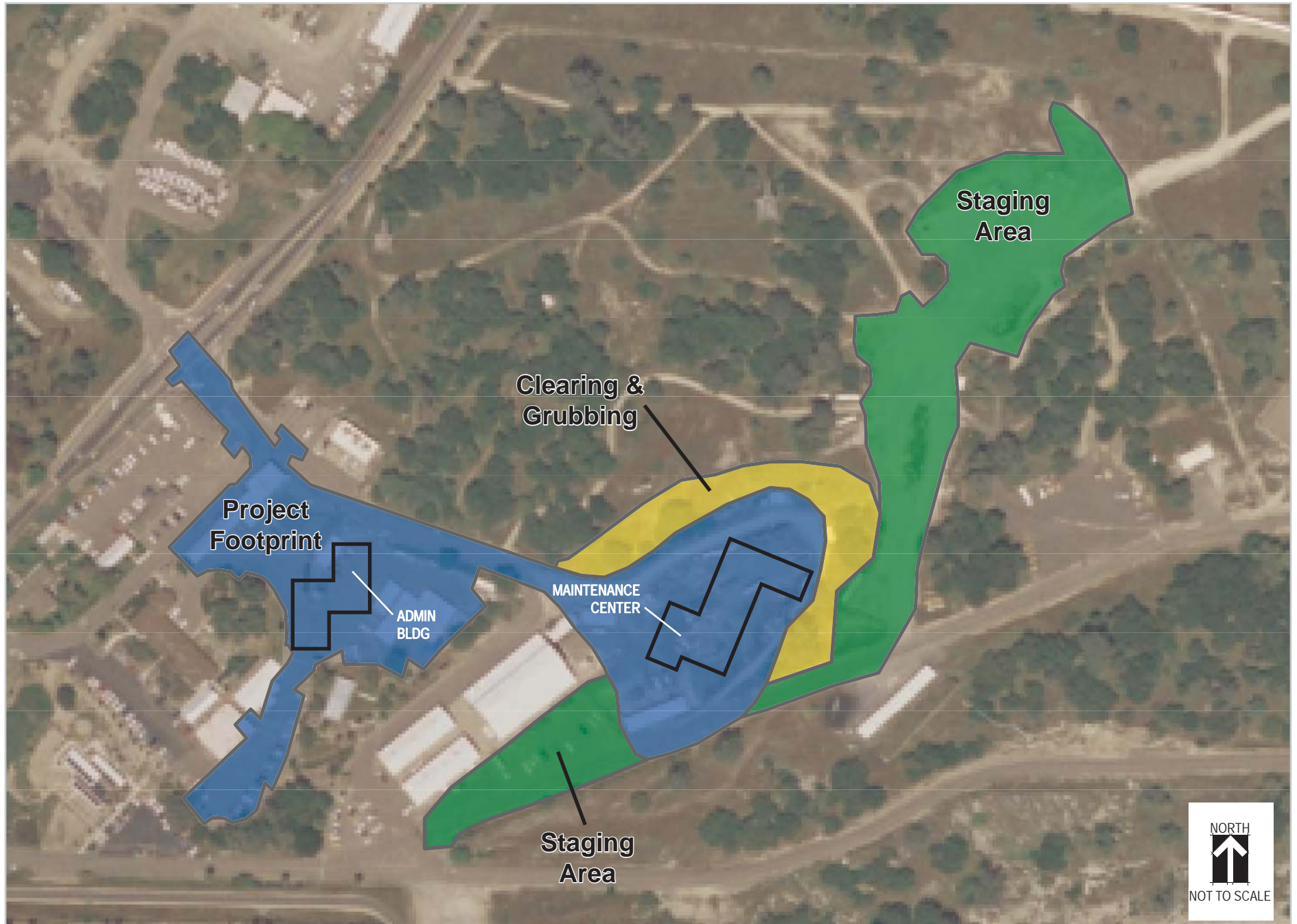




Figure 2-2
Buildings to be Removed Under the Proposed Action
Central California Area Office

2.2.1 Phase 1 - CCAO Maintenance Center

The first phase of the project would involve construction of a new Maintenance Center in the vacant storage yard area to the east of the existing warehouse building, just north of the Folsom Power Plant access road (See Figure 2-1). When this building and service area are complete, equipment and personnel would be relocated from the existing facilities. Some of the existing maintenance buildings would then be removed to provide a site for construction of a replacement CCAO Administration Building and adjoining staff and visitor parking areas (See Figure 2-2).

The proposed Maintenance Center would consist of two interconnected pre-engineered metal buildings, (11,920 and 3,045 square feet) interconnected with an 18 foot high eave height and a 3/12 hipped roof. There would also be a 5,320 square foot structure with a 9 foot plate height with 3/12 trussed sloped roof with clerestory attached to the larger pre-engineered building.

The 11,920 square foot pre-engineered metal building would house a carpenter shop with covered wood storage; a vehicle repair shop with two bays and office space; a drive-thru wash rack and water recycler; miscellaneous equipment and parts storage; and space for mechanical, electrical and communication equipment.

The 3,045 square foot pre-engineered metal building would house a drive-thru paint booth and sand blasting area, a compressor room, a sand storage and reclamation room, office space and a paint storage room.

The attached 5,320 square foot structure would house additional office space, kitchen/break room, assembly/conference room, toilet and locker rooms, miscellaneous tool and equipment storage areas, and an area for the shop dust collector.

The Maintenance Center building would be designed to meet Americans with Disabilities Act (ADA) accessibility requirements and would incorporate sustainable design measures outlined in the US Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

Approach by vehicle to the Maintenance Center would be improved by regrading the access road to the site with a vertical profile that meets the Caltrans standards. A portion of the electrical duct bank would have to be relocated to accommodate the Maintenance Center building. If kept by CCAO, the above ground fuel tanks would be relocated to a less vulnerable location and placed for better vehicle access.

For a cleaner appearance, the office component of the Maintenance Center building would be sited in the foreground, as seen from the access road, while visually screening the maintenance bays and service areas behind.

2.2.2 Phase 2 - CCAO Administration Building

The second phase of the project would involve construction of a new Administration Building near the existing CCAO offices, just east of the outdoor picnic area (See Figure 2-1). When the administrative office equipment and personnel are moved to the new building, the existing buildings will either be removed, utilized as additional office space, or turned over to other public agencies.

The proposed Administration Building would consist of two, two-story rectangular structures offset and attached side by side, each approximately 13,100 square feet. The building would be constructed of tilt-up concrete with 3/12 hipped standing seam metal roofs. A 10 foot wide central corridor would service each floor. The second floor would have a continuous clerestory above the corridor allowing natural light to penetrate the space. The main visitor center entrance would be covered with an arched metal roofed canopy supported by large tapered stone columns. A secondary employee entrance would be constructed to serve the employee parking. Ceiling heights in the building would vary from 9 to 12 feet, depending on the space usage. Two elevators and three main staircases would accommodate circulation between floors.

The Administration Building would be designed to meet ADA accessibility requirements and would incorporate sustainable design measures outlined in the USGBC LEED Green Building Rating System. Sprinklers and fire walls would be installed, as required.

A 25 car visitor parking lot would be separate from a 75 car employee parking area. Visitor vehicles would be kept within close proximity of the site entrance and guard station and the visitor entrance to the Administrative Offices would be visible, and obvious.

To improve the appearance of the CCAO's main entrance, the state's vehicle storage and maintenance center near the main gate would be visually screened with landformed earthen berms and plantings. Almost all existing trees and the outdoor picnic area would be preserved and protected during construction. New trees and drought resistant (xeric) landscaping would be installed to provide visual relief, shade, and screening of adjacent parking areas.

2.2.3 Construction Schedule

The CCAO BRP would be implemented in two phases. Table 2-1 presents the project schedule as of December 2008.

Central California Area Office Building Replacement Project
Environmental Assessment

Table 2-1. CCAO Building Replacement Project Schedule

Phase	Action	Schedule
1	Construction of new Maintenance Center and removal of existing maintenance facilities	Fall 2009
2	Construction of new Administration Building and removal of existing administration facilities.	Spring 2011

Chapter 3

Affected Environment and Environmental Consequences

This chapter presents the affected environment and environmental consequences of the CCAO BRP. Two alternatives are analyzed in this chapter; the No Action Alternative and the Proposed Action. Minimization measures that will be incorporated into the project to reduce impacts are described in each applicable resource section (Section 3.2 through 3.11) and summarized in Section 3.12.

3.1 Environmental Consequences Analysis

Provided in the following subsections are the resources analyzed in detail this EA; the resources not analyzed in detail in this EA as they would not be affected by the CCAO BRP; and the past, present and future projects considered in the cumulative analysis.

3.1.1 Resources Analyzed in Detail

The resource areas listed below have the potential to be affected by the CCAO BRP and are discussed in Sections 3.2 through 3.11 of this chapter.

- Water Resources
- Air Quality
- Biological Resources
- Geology and Soils
- Visual Resources
- Transportation and Circulation
- Noise
- Cultural Resources
- Public Services and Utilities
- Public Health and Safety

3.1.2 Resources Not Analyzed in Detail

Based on review of the CCAO BRP Proposed Action, the following environmental resources were determined to have no impacts as a result of the Proposed Action and are not analyzed in this EA. These resources are:

- **Water Supply** – The Proposed Action would not result in an increase in water use and no changes to Folsom Reservoir operations would occur. The Proposed Action would not affect water supply.
- **Groundwater Resources**–Underlying the CCAO Headquarters are the bedrock formations of the Sierra Nevada foothill complex. Water supply for the CCAO Headquarters is obtained from surface water sources. No groundwater resources are present in the project area; therefore the Proposed Action would not affect groundwater.

- **Agricultural Resources** - No lands are designated as agricultural within the project area; therefore no agricultural resources would be affected by the Proposed Action.
- **Land Use, Planning, and Zoning** – The Proposed Action would occur on Federal property and would not require any changes to land use, planning, or zoning.
- **Recreation** - There are no recreation facilities within the project area and public access is prohibited. There would be no impacts to existing recreation facilities.
- **Population and Housing** - The Proposed Action would not result in impacts that would cause changes to population or housing.
- **Hydropower** - No changes to the releases made from Folsom Reservoir would occur as part of the Proposed Action; therefore there would be no impacts to hydropower.
- **Indian Trust Assets (ITAs)** - No ITAs exist within or near the project site and no impacts to ITAs would occur.
- **Environmental Justice** - No minority or low income populations are present within or directly adjacent to the project area; therefore no environmental justice impacts would occur.
- **Socioeconomics** – The Proposed Action would not increase the number of staff at the CCAO Headquarters. Construction workers are expected to come from the surrounding local communities and would not require new housing or services. Recreation at the Folsom Lake State Recreation Area would not be affected and the project area is not open to the public. There would be no socioeconomic impacts.

3.1.3 Cumulative Analysis

A cumulative analysis is presented for each resource area. The analysis considers reasonable past, present, and future projects that could occur in the area of Folsom Dam and Reservoir and could contribute to cumulative impacts. The cumulative projects considered for the analysis are listed in Table 3.1-1.

Table 3.1-1. Cumulative Projects

Project Name	Description	Status
New Folsom Bridge	New bridge downstream of Main Concrete Dam	In Construction
Auburn-Folsom Road Widening	Widening of Auburn-Folsom Road near Dike 5 and 6	Complete
Folsom Dam Safety and Flood Damage Reduction Project	Upgrades to existing dam structures and new Auxiliary Spillway	In Construction
San Juan Water District Raw Water Bypass Pipeline Project	Construction of a new raw water pipeline parallel to Reclamation's existing 84-inch pipeline at the toe of Right Wing Dam	Anticipated Start Date: July 2009
California Health Care Facility	1,400-bed health care facility to serve Folsom State Prison and California State Prison	Unknown

3.2 Water Resources

This section presents the affected environment and environmental consequences for water resources.

3.2.1 Regulatory Setting

This section describes applicable laws and regulations for implementation of the Proposed Action.

Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and authorizes the U.S. Environmental Protection Agency (USEPA) to implement pollution control programs. In California, the USEPA has delegated authority to the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs).

All point sources that discharge into waters of the U.S. must obtain a National Pollutant Discharge Elimination System (NPDES) permit under provisions of Section 402 of the CWA. The NPDES permit process also provides a regulatory mechanism for the control of non-point source pollution created by runoff from construction and industrial activities, and general and urban land use, including runoff from streets.

Projects in California involving construction activities (e.g., clearing, grading, or excavation) with land disturbance greater than one acre must file a Notice of Intent (NOI) with the applicable RWQCB to indicate their intent to comply with the State General Permit for Storm Water Discharges Associated with Construction Activity (General Permit). The General Permit establishes conditions to minimize sediment

and pollutant loadings and requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) prior to construction. The SWPPP is intended to help identify the sources of sediment and other pollutants, and to establish Best Management Practices (BMPs) for storm water and non-storm water source control and pollutant control. The Proposed Action would disturb an area greater than one acre in size, and would therefore require an NPDES permit from the Central Valley Regional Water Quality Control Board (CVRWQCB).

Section 404 of the CWA regulates the discharge of dredge or fill material into wetlands and/or waters of the United States and requires that a permit be obtained from the Corps prior to such discharge. As authorized by the CWA, the Corps to issue individual or general permits, depending on the size of area to be filled and the extent of the impacts.

The discharge of dredge or fill material to waters of the State is regulated under Section 401 of the CWA. Specifically in the State of California, the applicable Regional Water Quality Control Board (RWQCB) administers Section 401 and either issues or denies water quality certifications depending upon whether the proposed discharge or fill material complies with applicable State and Federal laws. In addition, policies and regulations governing the protection of the beneficial uses of the State's water resources must also be followed. All actions that require a CWA Section 404 permit from the Corps also require a 401 water quality certification from the RWQCB, to ensure the discharge complies with State water quality regulations.

Porter-Cologne Water Quality Control Act and Basin Plans

The Porter-Cologne Water Quality Control Act of 1970 established the SWRCB and nine RWQCBs within the State of California. These agencies are the primary state agencies responsible for protecting California water quality to meet present and future beneficial uses and regulating appropriative surface rights allocations.

Section 303 of the CWA requires states to adopt water quality standards which "*consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.*" According to Section 13050 of the California Water Code, Basin Plans consist of a designation or establishment of beneficial uses to be protected for the waters within a specified area and water quality objectives to protect those uses. The preparation and adoption of water quality control plans, or Basin Plans, and statewide plans, is the responsibility of the SWRCB.

The CVRWQCB Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (CVRWQCB Basin Plan) regulates waters of the state for the surrounding waterbodies in the project area, including Folsom Reservoir and the Lower American River. The CVRWQCB Basin Plan establishes water quality requirements based on the beneficial uses designated for each waterbody.

3.2.2 Affected Environment

Although no water resources are present in the project area, Folsom Reservoir and the Lower American River are within close proximity to the project area. Folsom Reservoir is at the confluence of the North and South Forks of the American River, which drain a portion of the American River Basin. The reservoir was formed by construction of Folsom Dam in 1956 and currently has a maximum storage capacity of 977,000 acre-feet. Although the maximum depth of the reservoir is 266 feet just behind Folsom Dam, most of the reservoir is shallower averaging approximately 66 feet in depth. The dam and reservoir are jointly operated by Reclamation and the U.S. Army Corps of Engineers (Corps) for flood control, irrigation water supply, M&I water supply, power generation, fish and wildlife, recreation, and water quality purposes.

Downstream of Folsom Dam is Folsom Reservoir's afterbay, Lake Natoma. Lake Natoma is a re-regulating reservoir controlling flows caused by the operation of Folsom Power Plant. Lake Natoma has a maximum storage capacity of 9,000 acre-feet, and at its full capacity, consists of approximately 500 surface-acres of water.

The Lower American River is just east of the project area and flows from the base of Folsom Dam to the confluence with the Sacramento River in the City of Sacramento. Both Folsom Reservoir and Lake Natoma help to regulate stream flow and temperature requirements on the Lower American River.

3.2.3 Environmental Consequences

The environmental consequences of the Proposed Action and the No Action Alternative are described below.

3.2.3.1 No Action Alternative

The No Action Alternative would not involve construction of new CCAO facilities. There would be no change to the affected environment; therefore, there would be no impacts to water resources.

3.2.3.2 Proposed Action

The Proposed Action would temporarily disturb an area of approximately 10 acres for construction and staging activities; however almost half of this area is either paved or contains gravel. Prior to construction several areas would need to be cleared of vegetation and graded. During the rainy season (October through March), areas cleared of vegetation may contribute to the transportation of sediment in stormwater runoff. Any discharge of this stormwater runoff to waterways could violate the CWA and exceed existing CVRWQCB Basin Plan water quality requirements. Minimization Measure WQ-1 would be required to reduce this impact.

There is one area at the base of the hill to be cleared and grubbed that may be considered jurisdictional waters of the U.S. Construction activities would remove

this area through grading. With implementation of Minimization Measure WQ-2, impacts to wetlands and other waters of the U.S. would be reduced.

3.2.4 Minimization Measures

WQ-1: NPDES Construction Permit and SWPPP

The Construction Contractor will be required to obtain a State General Permit for Storm Water Discharges Associated with Construction Activity according to the NPDES program. This will entail filing a NOI with the CVRWQCB and development and implementation of a SWPPP. The SWPPP will describe BMPs that will be implemented to contain stormwater runoff on-site and to reduce erosion and sedimentation.

WQ-2: Comply with all Clean Water Action Section 404 Requirements, as Appropriate

Prior to project construction, Reclamation will comply with all Clean Water Action Section 404 and Section 401 requirements, as appropriate. If necessary, a General Permit will be obtained from the Corps for impacts to jurisdictional waters of the U.S. and a 401 water quality certification will be obtained from the CVRWQCB.

3.2.5 Cumulative Effects

The California Health Care Facility, New Folsom Bridge, and Folsom Dam Safety and Flood Damage Reduction Project construction activities will generally take place outside the CCAO BRP project area. These projects are required to implement SWPPP measures to control stormwater runoff and protect water quality and are not expected to contribute to cumulative water quality effects associated with stormwater runoff.

Construction of the Raw Water Pipeline Bypass Project would occur just north of the CCAO Headquarters in the same timeframe as the Proposed Action. This project would involve construction of a bypass pipeline parallel to Reclamation's existing 84-inch raw water pipeline. Construction activities will include clearing vegetation and excavation of a trench for the new pipeline. The Proposed Action and the Raw Water Pipeline Bypass Project could both contribute to stormwater runoff. However, both projects would be required to obtain NPDES permits for construction and would implement SWPPPs to reduce erosion and runoff and contain stormwater on-site. With proper implementation of such measures, no cumulative effects to water quality are expected.

3.3 Air Quality

This section presents the affected environment and environmental consequences for air quality.

3.3.1 Regulatory Setting

This section describes air quality laws and regulations that are applicable to the project.

National Ambient Air Quality Standards

Air quality management and protection responsibilities exist in Federal, State, and local levels of government. The primary statute that establishes ambient air quality standards and establishes regulatory authorities to enforce regulations designed to attain those standards is the Federal Clean Air Act (CAA).

As required by the Federal CAA, the USEPA has established and continues to update the National Ambient Air Quality Standards (NAAQS) for specific “criteria” air pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), inhalable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. The NAAQS for these pollutants are listed in Table 3.3-1, and represent the levels of air quality deemed necessary by USEPA to protect the public health and welfare with an adequate margin of safety.

Within the last three years, the USEPA has implemented the new 8-hour O₃ and PM_{2.5} (24-hour and annual) NAAQS and has revoked the 1-hour O₃ and annual PM₁₀ NAAQS. More recently, USEPA has adopted a more stringent 24-hour PM_{2.5} standard, 35 µg/m³. However, area attainment designations (defined below) will not be made for approximately three years after the rule was effective (December 18, 2006).

The Federal CAA requires states to classify air basins (or portions thereof) as either “attainment” or “non-attainment” with respect to criteria air pollutants, based on whether the NAAQS have been achieved, and to prepare air quality plans containing emission reduction strategies for those areas designated as “non-attainment.” Sacramento County is in nonattainment for ozone (8-hour standard) and PM₁₀ (24-hour standard). A summary of the attainment status for all criteria pollutants is presented in Table 3.3-2.

Table 3.3-1. National Ambient Air Quality Standards

Pollutant	Averaging Period	Standard, as parts per million by volume (ppmv)	Standard, as micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)	Violation Criteria
Ozone (O_3)	8 hours	0.08	157	If exceeded on more than 3 days in 3 years
Carbon monoxide (CO)	8 hours	9	10,000	If exceeded on more than 1 day per year
	1 hour	35	40,000	If exceeded on more than 1 day per year
Nitrogen dioxide (NO_2)	Annual	0.053	100	If exceeded
Sulfur dioxide (SO_2)	Annual	0.03	80	If exceeded
	24 hours	0.14	365	If exceeded on more than 1 day per year
	3 hours	0.5	1,300	If exceeded on more than 1 day per year
Inhalable particulate matter (PM_{10})	24 hours	N/A	150	If exceeded on more than 1 day per year
Fine particulate matter ($\text{PM}_{2.5}$)	Annual	N/A	15	If exceeded
	24 hours	N/A	65 / 35 ^a	If exceeded on more than 1 day per year

a. Lower standard ($35 \mu\text{g}/\text{m}^3$) adopted by USEPA, effective on December 18, 2006
Sources: 40 CFR Part 50; and 71 FR 61144.

**Table 3.3-2. NAAQS Attainment Status
(Sacramento County)**

Pollutant	Federal Status
O_3	Nonattainment, Serious ^a
PM_{10}	Nonattainment, Moderate ^b
$\text{PM}_{2.5}$	Attainment
CO	Maintenance
NO_2	Attainment
SO_2	Attainment

Source: SMAQMD 2008.

- On June 15, 2005, the USEPA revoked the 1-hour ozone standard in lieu of the 8-hour standard.
- On December 18, 2006, the USEPA revoked the annual PM_{10} standard

State Implementation Plans

Counties or regions that are designated as Federal non-attainment areas for one or more criteria air pollutants must prepare a State Implementation Plan (SIP) that demonstrates how the area will achieve attainment of the standards by the Federally mandated deadlines. In addition, those areas that have been redesignated from non-attainment to attainment are required to have a maintenance plan that shows how the area will maintain the standard for up to 10 years.

Recent air quality monitoring data in the region indicates that the PM₁₀ NAAQS has been achieved. Sacramento County has not submitted a request to redesignate the area as in attainment for PM₁₀. In addition to the official request to USEPA, the County would also need to submit a Maintenance Plan to the USEPA that would provide a 10-year plan for maintaining air quality in the region.

On February 14, 2008, the California Air Resources Board (CARB) submitted a letter to the USEPA requesting a voluntary redesignation of the 8-hour ozone standard for Sacramento County. CARB recommended that the classification be bumped up from “serious” to “severe-15.” The revised classification was requested because the region would be unable to meet the Federal NAAQS by the deadline imposed for serious nonattainment. The region had previously been classified as “severe” nonattainment under the revoked 1-hour ozone standard.

General Conformity

Section 176 (c) of the CAA (42 U.S.C. 7506(c)) requires any entity of the Federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable SIP required under Section 110 (a) of the Federal CAA (42 U.S.C. 7410(a)) before the action is otherwise approved. In this context, conformity means that such Federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards. Each Federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact, conform to the applicable SIP before the action is taken. This project is subject to the General Conformity Rule because it is sponsored and supported by a Federal agency.

On November 30, 1993, USEPA promulgated final general conformity regulations at 40 CFR 93 Subpart B for all Federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed Federal action in a non-attainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutants caused by the proposed action equal or exceed certain de minimis amounts, thus requiring the Federal agency to make a determination of general conformity. The de minimis amounts for the region covering Sacramento County are presented in Table 3.3-3.

Table 3.3-3. General Conformity de minimis Thresholds for Sacramento County

Pollutant	Federal Status	<i>De minimis</i> Threshold (TPY)
PM ₁₀	Nonattainment, Moderate	100
CO	Maintenance	100
NO _x ^a	Nonattainment, Serious	50
VOC ^a	Nonattainment, Serious	50

TPY = tons per year

- a. If Sacramento County is reclassified as severe nonattainment for ozone, then the de minimis threshold for NO_x and VOC will be reduced to 25 TPY.

Source: 40 CFR 93.153.

Regardless of the proposed action's emissions relative to the de minimis amounts, if this total represents 10 percent or more of the area's total emissions of that pollutant, the action is considered regionally significant and the Federal agency must make a determination of general conformity. By requiring an analysis of direct and indirect emissions, USEPA intended the regulating Federal agency to make sure that only those emissions that are reasonably foreseeable and that the Federal agency can practicably control subject to that agency's continuing program responsibility will be addressed.

Air Quality Management at the Local Level

The Sacramento Metropolitan Air Quality Management District (SMAQMD) manages air quality in Sacramento County and coordinates with the other districts to develop SIP updates.

In addition to permitting and rule compliance, air quality management at the local level is also accomplished through SMAQMD imposition of mitigation measures. In the SMAQMD, the construction significance thresholds are 85 lbs/day for NO_x emissions, and 50 µg/m³ for PM₁₀ ambient concentrations.

3.3.2 Affected Environment

3.3.2.1 Sacramento County Emissions Inventories

The existing air quality conditions for a project area are typically the result of meteorological conditions and existing emission sources in an area. CARB has compiled the 2006 emission inventory for Sacramento County. These results of this inventory are presented in Table 3.3-4.

On-road motor vehicles are the major source of VOC, CO, and NO_x emissions in Sacramento County. Other (off-road) mobile vehicles and equipment are the major source of SO₂ emissions, and contribute substantially to VOC, CO, and NO_x emissions. Fugitive dust primarily from construction sites, paved and unpaved

roadways, and farming operations is the major source of PM₁₀ and PM_{2.5}, with substantial contributions from residential fuel combustion.

Table 3.3-4. 2006 Emissions Inventory for Sacramento County

Source Category	2006 Annual Emissions (tons per year)					
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Point Sources	2,865	1,372	1,358	26	737	358
Stationary Area Sources	6,278	14,622	1,128	44	14,133	3,657
Non-Road Mobile Sources	5,143	31,521	9,662	179	588	526
On-Road Mobile Sources	9,213	86,067	17,695	139	759	540
Total	23,499	133,583	29,842	387	16,217	5,081

Source: CARB 2007

3.3.2.2 Monitoring Data – Criteria Pollutants Concentrations

Air quality data from the Sacramento (Del Paso Manor) monitoring station are summarized in Table 3.3-5.

3.3.3 Environmental Consequences

The following section provides the significance criteria and thresholds used to determine if project air quality effects are significant, methodology for estimating project emissions, project construction emissions, identification of significant impact, if any, and proposed Minimization Measures for such impacts, and general conformity discussion. The emissions values presented as part of this air quality analysis are the best estimates available.

3.3.3.1 Significance Criteria and Thresholds

The major thresholds are the General Conformity de minimis emission levels for CO, PM₁₀, and the O₃ precursors (NO_x and VOC), as well as the NAAQS (NEPA). A project will have a significant adverse air quality impact if it either causes or contributes to an exceedance of a standard (for pollutants in attainment) or makes a substantial contribution to an existing exceedance of an air quality standard (for pollutants in non-attainment).

Table 3.3-5. Summary of Air Pollutant Monitoring Data in Sacramento

Criteria Air Pollutant and Station Location	Yearly Monitoring Data			NAAQS
	2005	2006	2007	
Carbon Monoxide (CO) <u>Sacramento – Del Paso Manor</u> Highest 8-hour concentration (ppm) Days above NAAQS	3.51 0	3.49 0	2.90 0	9
Ozone (O₃) <u>Sacramento – Del Paso Manor</u> Highest 8-hour concentration (ppm) Days above NAAQS	0.117 19	0.102 24	0.115 10	0.075
Coarse Particulate Matter (PM₁₀) <u>Sacramento – Del Paso Manor</u> Highest 24-hour concentration (µg/m ³) Days above NAAQS	72.0 0	63.0 0	70.0 0	150
Fine Particulate Matter (PM_{2.5}) <u>Sacramento – Del Paso Manor</u> Highest 24-hour concentration (µg/m ³) Annual mean (µg/m ³) Number of days above NAAQS	80.0 11.5 18	78.0 13.1 19	61.0 12.3 22	35 15.0

Source: CARB 2008a; CARB 2008b

3.3.2.1 No Action Alternative

Under the No Action Alternative, construction activities for the Proposed Action would not occur. There would be no air quality impacts associated with the No Action Alternative.

3.3.2.2 Proposed Action

Emission Inventories

Emissions of criteria pollutants would occur during construction activities at the project site. Typical construction activities including site grading and hauling will contribute to fugitive dust emissions or on- and off-site diesel exhaust emissions.

Construction impacts were estimated using the Urban Emissions Model (URBEMIS, Version 9.2.4). Default values in the model were modified with project-specific data provided by Reclamation. Table 3.3-6 summarizes the results of the emission calculations.

The SMAQMD has a threshold of significance for construction of 85 pounds per day (lbs/day) for NO_x (SMAQMD 2004). Emissions from the project are expected to be less than this threshold; therefore, the project will be less than significant for air quality impacts from construction. Total annual emissions are predicted to be less

than the General Conformity thresholds shown in Table 3.3-6; therefore, no further analysis under General Conformity is required.

Table 3.3-6. Unmitigated Construction Impacts (Air Quality)

Project Phases	Emission Estimates (lbs/day)				
	ROG/VOC	NO _x	CO	PM ₁₀	PM _{2.5}
Year	Daily Emissions (pounds per day)				
2009 Totals	4.61	40.14	17.46	7.20	2.87
2011 Totals	7.85	49.31	31.30	337.10	72.01
	Annual Emissions (tons per year)				
2009 Totals	0.01	0.06	0.03	0.01	0.00
2011 Totals	0.23	1.78	1.03	5.48	1.21

Emissions from operation of the buildings were also estimated using URBEMIS. The SMAQMD has thresholds of significance of 65 pounds per day for both VOC and NO_x (SMAQMD 2004). Table 3.3-7 provides a summary of operational emissions. Total emissions as predicted in the model are expected to be less than SMAQMD thresholds; therefore, the project is expected to be less than significant.

Table 3.3-7. Unmitigated Operational Impacts (Air Quality)

Project Phases	Emission Estimates (lbs/day)				
	ROG/VOC	NO _x	CO	PM ₁₀	PM _{2.5}
Daily Emissions, lbs/day	12.10	14.19	165.62	20.76	4.02
Annual Emissions, tons/yr	2.24	3.01	28.73	3.79	0.73

3.3.4 Minimization Measures

No Minimization Measures would be necessary.

3.3.5 Cumulative Effects

Although construction of the Proposed Action would lead to air quality impacts, these impacts would be below the thresholds and would be considered insignificant. The California Health Care Facility, New Folsom Bridge Project, Raw Water Pipeline Bypass Project, and Folsom Dam Safety and Flood Damage Reduction Project would also contribute to air quality impacts. Although the projects have the potential to occur concurrently, all will employ minimization measures to reduce emissions to below the threshold levels. Because all of the projects, including the Proposed Action, will minimize emissions as needed and required, there would be no cumulatively considerable impacts to air quality.

3.4 Biological Resources

This section presents the affected environment and environmental consequences for biological resources.

3.4.1 Regulatory Setting

This section describes applicable biological laws and regulations.

Endangered Species Act of 1973; 16 USC §1531 et seq.; 50 CFR Parts 17 and 222

The Endangered Species Act (ESA) requires Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any listed species (according to the lists maintained by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS)) or result in the destruction or adverse modification of habitat critical to such species' survival. To ensure against jeopardy, each Federal agency must consult with the USFWS and/or NMFS.

Migratory Bird Treaty Act: 16 USC §703-711; 50 CFR Subchapter B

This act includes provisions for protection of migratory birds, including basic prohibitions against any taking not authorized by Federal regulation. The administering agency is the USFWS.

Clean Water Act of 1977; 33 USC §1251-1376; 30 CFR §330.5(a) 26

Section 404 of the CWA requires that a permit be obtained prior to any discharge of dredged or fill material into wetlands and waters of the United States. The Corps is the administering agency for Section 404 of the CWA and issues General Permits (for activities causing minimal adverse effects) and Individual Permits (for activities not covered under General Permits) and for these activities.

Section 401 of the CWA regulates the discharges of dredged or fill material into waters of the State. These actions must not violate State water quality standards or the beneficial uses designated for each waterbody. The RWQCB administers Section 401 certification, depending upon whether the proposed discharge or fill material complies with applicable State and Federal laws. All entities requiring a CWA Section 404 permit also need to obtain 401 water quality certification from the applicable RWQCB, in this case the CVRWQCB.

Executive Order 11990, Protection of Wetlands (May 24, 1977)

This order provides for the protection of wetlands. The administering agency is the Corps.

California Endangered Species Act of 1984, California Fish and Game Code §2050-2098

This act includes provisions for the protection and management of species listed by the State as endangered or threatened, or designated as candidates for such listing. This act includes a requirement for consultation "to ensure that any action authorized

by a State lead agency is not likely to jeopardize the continued existence of any endangered or threatened species...or result in the destruction or adverse modification of habitat essential to the continued existence of the species” (§2090). Plants of California declared to be endangered, threatened, or rare are listed at 14 CCR §670.2. Animals of California declared to be endangered, threatened, or rare are listed at 14 CCR §670.5. The administering agency is the California Department of Fish and Game (CDFG).

Native Plant Protection Act of 1977; California Fish and Game Code §1900 et seq.

This act lists State-designated rare and endangered plants and provides specific protection measures for identified populations. The administering agency is the CDFG. Additionally, the California Native Plant Society has created five lists of plants with varying degrees of concern from presumed extinct (List 1A) to plants of limited distribution (List 4). All of the plants constituting List 1B (plants rare, threatened or endangered in California and elsewhere) meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for State listing.

California Species Preservation Act of 1970; California Fish and Game Code §900-903

This act includes provisions for the protection and enhancement of the birds, mammals, fish, amphibians, and reptiles of California. The administering agency is the CDFG.

California Fish and Game Code §1930-1933

These code sections provide for the Significant Natural Areas program and database. The administering agency is the CDFG.

California Fish and Game Code §3503

This code section makes it unlawful to take, possess, or needlessly destroy any birds (including birds-of-prey) or the nest or eggs of any birds. The administering agency is the CDFG.

California Fish and Game Code §3511 and 5050

This code section prohibits the taking or possessing of birds and reptiles listed as “fully protected.” The administering agency is the CDFG.

3.4.2 Affected Environment

Terrestrial habitats in the CCAO area include landscaped and developed areas, interior live oak woodlands, and grassland.

3.4.2.1 Landscaped and Developed Areas

Developed areas include the CCAO facilities which currently consist of office and maintenance buildings, storage buildings parking lots, and paved and unpaved roads.

Adjacent land uses include the Folsom Reservoir, Lower American River, the New Folsom Bridge (under construction at the time of this document), American River Watershed Education Center Facilities, CDPR Gold Fields District Headquarters and San Juan Water District facilities. CCAO facilities are surrounded by the Folsom Lake State Recreation Area. Vegetation within this area consists of landscape plants and occasionally native species that have been preserved in place. Common wildlife species that occur in landscaped and developed areas include the European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), deer mouse (*Peromyscus maniculatus*), California ground squirrel (*Spermophilus beecheyi*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*).

3.4.2.2 Interior Live Oak Woodland and Grassland

Vegetation that characterizes interior live oak woodland includes interior live, black, and blue oaks (*Quercus wislizeni*, *kelloggii*, and *douglasii*), foothill pine (*Pinus sabiniana*), poison oak (*Toxicodendron diversilobum*) and California buckeye (*Aesculus californica*). Grassland vegetative species often include brachypodium (*Brachypodium distachyon*), ripgut and soft chess brome (*Bromus diandrus* and *hordeaceus*), and wild oats (*Avena fatua*)

Wildlife within live oak woodland and grassland areas typically consists of woodpeckers (*Picoides nuttallii*), northern flickers (*Colaptes auratus*), whitebreasted nuthatches (*Sitta carolinensis*), oak titmice (*Baeolophus inornatus*), western gray squirrels (*Sciurus griseus*), raccoons (*Procyon lotor*), hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), California quail, (*Callipepla californica*), wild turkeys (*Meleagris gallopavo*), northern flickers (*Colaptes auratus*), western scrub-jays (*Aphelocoma californica*), ruby-crowned kinglets (*Regulus calendula*), bushtits (*Psaltiriparus minimus*), warbling vireos (*Vireo gilvus*), Hutton's vireos (*Vireo huttoni*), Wilson's warblers (*Wilsonia pusilla*), American robins (*Turdus migratorius*), Bullock's orioles (*Icterus bullockii*), house finches (*Carpodacus mexicanus*), spotted towhees, gopher snakes, common kingsnakes (*Lampropeltis getula*), bobcats (*Lynx rufus*), gray foxes (*Urocyon cinereoargenteus*), striped skunks, mule deer (*Odocoileus hemionus*), and a variety of rodents (LSA 2003).

3.4.2.3 Wetlands and Other Aquatic Habitats

Although no formal wetland delineation was conducted, it is believed, based on observations with USFWS during a survey for elderberry shrubs within the project area, that there may be a jurisdictional drainage in the area to be cleared and grubbed. This potential drainage consists of a low swale at the base of the hill and is vegetated with willows and elderberry shrubs.

3.4.2.4 Special-Status Species

Table 3.4-1 includes a list of all special-status species (Federal and State listings) provided by USFWS and downloaded from the California Natural Diversity Database (CNDDB) potentially occurring within the Folsom 7.5-minute quad. It identifies species status, habitat requirements, and the likelihood of occurrence. There is the potential for eight special-status species (one invertebrate, one amphibian, four birds, one mammal, and one plant) to occur onsite, as described below. Critical habitat for these species does not occur in the project area.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) is a Federally-threatened species known that is associated with various species of elderberry (*Sambucus* spp.). This species generally occurs in savanna areas and along waterways and in floodplains that support remnant stands of riparian vegetation containing elderberry shrubs. In order to serve as habitat, elderberry stems must be greater than 1.0 inch in diameter at ground level.

The project area includes blue elderberry (*Sambucus mexicana*), the obligate host of the VELB (Figure 3.4-1). No exit holes have been observed in the elderberry shrubs in the project area; however, exit holes have been observed elsewhere in the Folsom area. Therefore this species is assumed to occur within the project area.

Because of the high probability of the occurrence of VELB, protocol surveys were conducted by both CDM and USFWS. Surveys for VELB record the number of elderberry shrubs, their stem diameters, and the presence and number of exit holes formed by VELB as they exit the branch. The surveys for VELB resulted in the recording of 32 elderberry shrubs within the project area or 100 feet of this area.

California Red-Legged Frog

The California red-legged frog (*Rana aurora draytonii*) is Federally listed as threatened and is a California species of special concern. The USFWS released a recovery plan in 2002 (USFWS 2002). Critical habitat was again proposed on November 3, 2005 (Federal Register 2005), and the final rule was published on April 16, 2006 (Federal Register 2006). No critical habitat is within the project area.

California red-legged frogs are usually associated with aquatic habitats, such as creeks, streams and ponds, and occur primarily in areas having pools approximately 3 feet deep, with adjacent dense emergent or riparian vegetation (Jennings and Hayes 1988). Adults move between breeding and foraging habitats in spring and summer (Jennings and Hayes 1994). California red-legged frogs breed from November to March. Egg masses are attached to emergent vegetation (Jennings and Hayes 1994) and hatch within fourteen days. Metamorphosis generally occurs between July and September.

Although perennial and intermittent creeks and Folsom Reservoir may provide marginally suitable habitat for this species (according to CNDDDB, a juvenile California red-legged frog was observed along a small drainage adjacent to Fitch Way on the east side of the reservoir approximately one mile up the South Fork American River arm), this habitat type does not exist within the project area. The project area consists of developed and upland habitats and there have been no recorded sightings of the California red-legged frog within or near the project area; therefore, it is unlikely that this species occurs within the project area.

Table 3.4-1. Special Status Species and Critical Habitat Summary

<i>Species</i>	<i>Federal Status/ Critical Habitat</i>	<i>State Status</i>	<i>Habitat Requirements</i>	<i>Likelihood of Occurrence in the Project Area</i>
Fish				
Sacramento River Winter-run ESU Chinook Salmon (<i>Onchorhynchus tshawytscha</i>)	FE/CH	SE	Ocean and freshwater rivers and streams	None – no waterbodies onsite
Central Valley Spring-Run ESU Chinook Salmon (<i>Onchorhynchus tshawytscha</i>)	FT/CH	ST	Ocean and freshwater rivers and streams	None – no waterbodies onsite
Central Valley ESU Steelhead (<i>Onchorhynchus mykiss</i>)	FT/CH		Ocean and freshwater rivers and streams	None – no waterbodies onsite
Delta Smelt (<i>Hypomesus transpacificus</i>)	FT/CH	ST	Freshwater rivers and streams.	None – no waterbodies onsite
Invertebrates				
Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>)	FT/CH		Elderberry shrubs	Potential – elderberry shrubs occur onsite
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT/CH		Vernal pools and seasonal wetlands	None – habitat does not occur onsite
Vernal Pool Tadpole Shrimp (<i>Lepidurus packardii</i>)	FE/CH		Vernal pools and seasonal wetlands	None – habitat does not occur onsite
Conservancy Fairy Shrimp (<i>Branchinecta conservation</i>)	FE/CH		Vernal pools and seasonal wetlands	None – habitat does not occur onsite
Amphibians				
California red-legged frog (<i>Rana aurora draytonii</i>)	FT/CH	CSC	Quiet, permanent water in woods, forest clearings, riparian areas, and grasslands	Potential – isolated populations in the Folsom Reservoir area
California Tiger Salamander (<i>Ambystoma californiense</i>)	FT/CH	CSC	Grasslands and lowest foothill regions of Central and Northern California, which is where its breeding habitat (long-lasting rain pools) occurs. During dry- season, uses small mammal burrows as refuge	Unlikely - breeding habitat does not occur onsite
Western Spadefoot Toad (<i>Spea hammondi</i>)		CSC	Open areas with sandy or gravelly soils, in a variety of habitats. Rainpools are necessary for breeding.	Unlikely – breeding habitat does not exist onsite
Reptiles				

Table 3.4-1. Special Status Species and Critical Habitat Summary

<i>Species</i>	<i>Federal Status/ Critical Habitat</i>	<i>State Status</i>	<i>Habitat Requirements</i>	<i>Likelihood of Occurrence in the Project Area</i>
Giant Garter Snake (<i>Thamnophis gigas</i>)	FT	CT	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	None - waterbodies are not available onsite
Northwestern Pond Turtle (<i>Actinemys marmorata marmorata</i>)		CSC	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation. Nesting occurs in adjacent uplands.	Unlikely – waterbodies are not available onsite
Birds				
American peregrine falcon (<i>Falco peregrinus anatum</i>)	FD	CE/CFP	Protected edges of high cliffs, usually adjacent to marshes, lakes, or rivers that support plentiful bird populations.	Unlikely – habitat does not occur onsite
Swainson's Hawk (<i>Buteo swainsoni</i>)		CT	Open grasslands, prairies, farmlands, and deserts with trees for nesting.	Potential – limited habitat occurs onsite
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	FD	CE/CFP	Ocean shore, lake margins and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine.	Potential – limited habitat occurs onsite
White-Tailed Kite (<i>Elanus leucurus</i>)		CFP	Agricultural areas, grasslands, marshes, savannas, and other open land or sparsely wooded areas.	Potential – limited habitat occurs onsite
Loggerhead Shrike (<i>Lanius ludovicianus</i>)		CSC	Edge habitat along roadsides and hedgerows in agricultural regions.	Potential - limited habitat occurs onsite
Tricolored Blackbird (<i>Agelaius tricolor</i>)		CSC	Ponds and other wet areas with abundant vegetation for nesting and adjacent grasslands for foraging.	Unlikely – habitat does not occur onsite
Mammals				
Pallid Bat (<i>Antrozous pallidus</i>)		CSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open dry habitats with rocky areas for roosting. Also may use hollow trees and abandoned buildings	Potential – trees onsite could provide limited roosting habitat
Plants				
Brandagee Clarkia (<i>Clarkia biloba ssp. brandegeae</i>)		CNPS 1B	Chaparral and cismontane woodlands often integrated with live oak woodland and grassland at lower elevations	Potential – habitat occurs onsite

Table 3.4-1. Special Status Species and Critical Habitat Summary

<i>Species</i>	<i>Federal Status/ Critical Habitat</i>	<i>State Status</i>	<i>Habitat Requirements</i>	<i>Likelihood of Occurrence in the Project Area</i>
Pincushion Navarretia (<i>Navarretia myersii</i> ssp. <i>myersii</i>)		CNPS 1B	Vernal pools	None – habitat does not occur onsite
Sacramento Orcutt Grass (<i>Orcuttia viscid</i>)	FE/CH	CE, CNPS 1B	Vernal pools	None – habitat does not occur onsite

Acronyms and Abbreviations:

CCH	=	Candidate Critical Habitat	CSC	=	California Species of Concern
CE	=	State Endangered	FE	=	Federal Endangered
CT	=	State Threatened	FSC	=	Federal Species of Concern
CFP	=	California Fully Protected	FT	=	Federal Threatened
CH	=	Critical Habitat	FD	=	Federal Delisted
CNPS 1B	=	California Native Plant Society	PCH	=	Proposed Critical Habitat
List 1B					

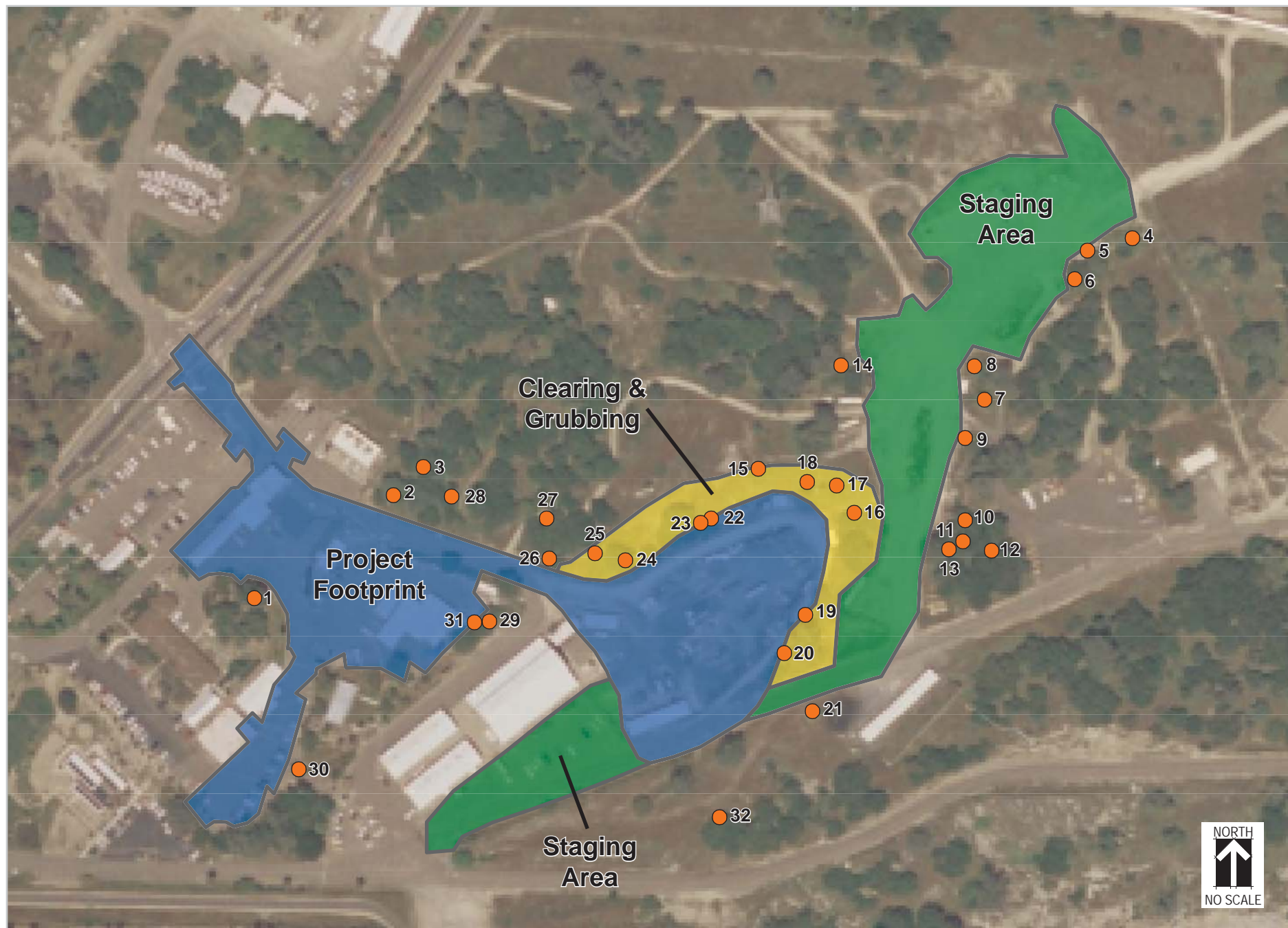


Figure 3.4-1
 Elderberry Shrubs
 Central California Area Office

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is a State threatened species that requires large, open grasslands and suitable nest trees typically adjacent to water. While there is potential for Swainson's hawks to forage in the project area, habitat is marginally suitable at best. Swainson's hawks breed from March through August, with peak activity from late May through July.

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) was formerly Federally listed as endangered under the Endangered Species List of 1967 (Federal Register 1967). In 1995, the bald eagle was downlisted to threatened (Federal Register 1995) and later was proposed for delisting as recovered in 1999 (Federal Register 1999). In 2006, USFWS re-opened the public comment period on the proposed delisting (Federal Register 2006). On August 8, 2007 the bald eagle was removed from the list of threatened and endangered species. Currently this species is listed as California Endangered under California ESA and is a California fully protected species. No critical habitat has been designated for the bald eagle. While bald eagles have been spotted around Folsom Reservoir, no nests have ever been observed within the project area.

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) is a California Fully Protected Species that occurs rear-round in coastal and valley lowlands associated with agricultural areas, grasslands, marshes, savannas, and other open land or sparsely wooded areas.

Suitable foraging habitat exists in the project area. However, since dense, broad-leaved deciduous trees are needed for nesting and roosting, the white-tailed kite is unlikely to nest in the project area.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is a California species of concern. This species is found in lowlands and foothills with scattered shrubs, trees, posts, fence lines, or other perches. The breeding season is from March to August. Suitable foraging habitat is present within the project area, although breeding is unlikely due to the disturbed nature of the forest habitat.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is a California species of concern typically found in rocky, mountainous areas near water, desert scrub, and open, sparsely vegetated grasslands. This species roosts in rock cracks, hollow trees, caves and abandoned buildings. Since suitable habitat is present, there is potential for the pallid bat to occur within the project area.

Brandagee Clarkia

The Brandagee clarkia (*Clarkia biloba ssp. brandegeae*) is a California Native Plant Society List 1B species. It occurs in chaparral and cismontane woodlands, often on roadside cuts from 73-915 meters in elevation. It blooms from May to July. Chaparral and cismontane woodlands often integrate with live oak and grassland habitats at lower elevations; therefore, there is a marginal likelihood that the Brandagee clarkia could exist onsite.

3.4.3 Environmental Consequences

This section presents the environmental consequences of the Proposed Action and the No Action Alternative.

3.4.2.1 No Action Alternative

Under the No Action Alternative, no new buildings would be constructed. There would be no changes to terrestrial habitats; therefore there would be no biological resource impacts.

3.4.2.2 Proposed Action

The effects of the Proposed Action were estimated based on the following conditions pertaining to implementation:

- Implementation of a spill prevention plan would reduce the risk of fuel or oil spills from construction and transportation equipment.
- Implementation of BMPs would control soil erosion due to construction activities and minimize potential construction-related effects on water quality.
- Standard dust control measures would be implemented.
- Where possible natural resources would be preserved in their existing condition or restored to an equivalent condition upon completion of the work.
- Where possible, existing trees within construction areas would be protected.

Impacts to Vegetation

Construction of the new CCAO facilities would likely require several areas to be cleared and graded in preparation for construction of the new buildings. As part of the clearing and grading, there would be a permanent loss of woodland and grassland habitat, including the removal of several trees and shrubs. Additionally, any trees adjacent to the clearing and grading or staging areas may be affected through damage to roots from excavation and heavy equipment. Finally vegetation may be affected by dust and/or erosion. Implementation of Minimization Measure BIO-1 would require protection of trees and their roots during construction and re-vegetation of

disturbed areas to restore native vegetation and reduce impacts from erosion immediately following construction.

Impacts to Wildlife

Construction of the CCAO facilities may have adverse impacts to wildlife, particularly birds, including injury or death from contact with construction equipment, permanent loss of habitat during clearing and grading, and disturbance in breeding, resting, and foraging habits through noise. Implementation of Minimization Measure BIO-2 would ensure that impacts to birds would be less than significant. In addition, Minimization Measure BIO-3 would ensure that construction personnel receive training on how to minimize impacts to wildlife.

Impacts to Valley Elderberry Longhorn Beetle

Actions resulting in the direct loss of elderberry shrubs (the obligate host plant of the VELB) or indirectly through the creation of dust during construction may result in adverse effects to individual beetles, pupae, or larvae as well as loss of habitat. Based on the elderberry survey, 32 elderberry shrubs that contain stems measuring 1.0 inch or greater in diameter at ground level were identified within 100 feet of the proposed construction activities. The plants that are within the Clearing & Grubbing area (Figure 3.4-1) will be directly affected and Reclamation is proposing the transplant of these 10 shrubs. The plants in the 100-foot buffer area would be indirectly affected by dust or other construction-related consequences and will be fenced with orange construction fencing to avoid any direct effects. Minimization Measure BIO-4 would reduce any effects that may occur as a result of construction. Tables 3.4-2 and 3.4-3 provide stem count and mitigation information.

Table 3.4-2. Valley Elderberry Shrub Stem Counts

Stem ID#	Max Diameter at Ground Level ¹				Exit Holes? ²	Riparian?	Transplant?
	<1	1≥3	3≥5	>5	Y / N	Y / N	Y/N
1		5	5		N	N	N
2	1	3			N	N	N
3	3	5			N	N	N
4	18	15	5	5	N	N	N
5	1			1	N	N	N
6	1	1	1		N	N	N
7	20	8	2	2	N	N	N
8				1	N	N	N
9		1	1	1	N	N	N
10				1	N	N	N
11	3	1	1	1	N	N	N
12	10	3	2		N	N	N
13		3	1		N	N	N
14	3	1			N	N	N
15	7	1	1	3	N	N	Y

Central California Area Office Building Replacement Project
Environmental Assessment

Table 3.4-2. Valley Elderberry Shrub Stem Counts

Stem ID#	Max Diameter at Ground Level ¹				Exit Holes? ²	Riparian?	Transplant?
	<1	1≥3	3≥5	>5	Y / N	Y / N	Y/N
16		1	2	5	N	N	Y
17	12	5	2	2	N	R	Y
18	2	3	2	1	N	N	Y
19	2			1	N	N	Y
20	1			1	N	N	Y
21				1	N	N	N
22				1	N	N	Y
23				1	N	N	Y
24	6	6	1	1	N	N	Y
25		3			N	N	Y
26		3	1		N	N	N
27			1		N	N	N
28			1		N	N	N
29	2	6	1		N	N	N
30	7	1	1	1	N	N	N
31		2			N	N	N
32		1			N	N	N

1 Shrub diameters will be measured at the soil level unless excessive woody debris, vines, or duff preclude this action.
In this case duff and debris will be compacted as much as possible and the measurement will be taken at the lowest possible location.
2 All stems measuring one inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

Table 3.4-3. Valley Elderberry Shrub Mitigation

Location	Stems	Exit Holes on Shrub	Elderberry Seedling Ration	Associated Native Plant Ratio	Total # Stems	Elderberry Seedling Mitigation	Associated Native Plant Mitigation
Non-riparian	>=1" & <=3"	No	1:1	1:1	14	14	14
		Yes	2:1	2:1	0	0	0
Non-riparian	>3" & <5"	No	2:1	1:1	6	12	12
		Yes	4:1	2:1	0	0	0
Non-riparian	>=5"	No	3:1	1:1	14	42	42
		Yes	6:1	2:1	0	0	0
Riparian	>=1" & <=3"	No	2:1	1:1	5	10	10
		Yes	4:1	2:1	0	0	0
Riparian	>3" & <5"	No	3:1	1:1	2	6	6
		Yes	6:1	2:1	0	0	0
Riparian	>=5"	No	4:1	1:1	2	8	8
		Yes	8:1	2:1	0	0	0
					Totals	92	92

Impacts to California Red-Legged Frog

There have been no recorded sightings of the California red-legged frog within or near the project area; therefore, the California red-legged frog is not likely to occur within the project area. No adverse effects to the California red-legged frog are expected with the construction of any project features. However, to verify that frogs are not within the project area, Minimization Measure BIO-5 will be implemented. As a result, California red-legged frogs are not likely to be affected by the project.

Impacts to Special-Status Birds and Bats

Special-status birds with the potential to occur within the project vicinity include Bald eagle, Swainson's hawk, white-tailed kite, and loggerhead shrike. In addition, one special-status bat, the pallid bat, has the potential to occur. Construction disturbance during the breeding season could result in impacts to special-status birds from the incidental loss of fertile eggs or nestlings, or nest abandonment. Likewise, construction noise could impact active roosting sites of the pallid bat if they occur within the project area. With implementation of Minimization Measure BIO-6 impacts to special-status bird and bat species would be reduced. As a result, special-status birds and bats may be affected but would not likely be adversely affected by construction.

Impacts to Special-Status Plants

Construction disturbance from clearing and grading will remove oak woodland and grassland that could provide habitat for the Brandagee clarkia. In order to verify that the Brandagee clarkia is not within the project area, Reclamation will implement Minimization Measure BIO-7. As a result, the Brandagee clarkia would not likely be affected by the project.

Impacts to Wetlands and Other Aquatic Habitats

As discussed in section 3.2 Water Resources, there is one area at the base of the hill to be cleared and grubbed that may be considered jurisdictional waters of the U.S. Construction activities would remove this area through grading. Therefore, the Proposed Action may affect aquatic habitat. With implementation of Minimization Measure WQ-2 in Section 3.2.4, impacts to wetlands and other waters of the U.S. would be reduced.

3.4.4 Minimization Measures

The following minimization measures will be incorporated into the project to reduce or avoid the biological impacts described above.

BIO-1: Tree Protection and Re-vegetation

In order to minimize direct impacts to trees located within the construction area, tree protection measures would be implemented prior to construction and re-vegetation would occur immediately following construction.

Tree protection measures would reduce impacts to trees during construction and may include the following measures:

1. Protective fencing will be installed at the Root Protection Zone of trees that would be directly affected by construction. The Root Protection Zone is defined as the area within a circle with a radius equal to the greatest distance from the trunk to any overhanging foliage in the tree canopy. Posts will be placed where they will not harm tree roots.
2. No construction staging or disposal of construction materials or byproducts including but not limited to paint, plaster, or chemical solutions will be allowed in the Root Protection Zone.
3. All work conducted in the ground within the Root Protection Zone of any protected tree will be accomplished with hand tools to the extent feasible.
4. "Natural" or pre-construction grade will be maintained in the Root Protection Zone.
5. In areas where the grade around the protected tree will be lowered, some root cutting may be unavoidable. Cuts will be clean and made at right angles to the roots. When practical, roots will be cut back to a branching lateral root. Any necessary root pruning to be conducted by qualified personnel. Cut roots subject to open air conditions longer than a few hours should be covered with burlap and maintained in a moist condition until covered by soil.
6. Root damage and soil compaction caused by heavy equipment traversing the Root Protection Zone in locations where it is unavoidable will be mitigated by applying plywood or mulch in the Root Protection Zone to avoid soil compaction.
7. All pruning will be conducted by a certified arborist or other qualified contractor.

Once construction has been completed, re-vegetation will occur to restore vegetated areas disturbed during construction to pre-construction conditions, to the extent feasible. Native plant species used for revegetation will be selected based on existing vegetation in the project area.

BIO-2: Nesting Migratory Birds, Including Raptors

To the extent possible, removal of trees and potential bird breeding habitat in the project area would occur between September 1 and January 31, when birds are not expected to be nesting, in order to comply with the Migratory Bird Treaty Act. Prior to any tree removal and construction, a qualified biologist or ornithologist would

conduct preconstruction field surveys in and adjacent to the project area for nesting migratory birds, including raptors. Surveys would be conducted during the season immediately preceding tree removal and grading operations when birds are building and defending nests or when young are still in nests and dependent on the parents. If no nests are found during the surveys, tree removal and grading may proceed. If nests are found, construction activities including tree removal shall not be conducted within a buffer zone designated by USFWS or the CDFG around the nest(s) until after the breeding season (February to the end of August).

BIO-3: Biological Resources Awareness Training

Prior to construction, including clearing of vegetation and grading, mandatory training regarding the biological resources present at the Proposed Action site will be provided to all construction personnel. The training will be developed and provided by a qualified biologist familiar with the sensitive species that may occur in the project area and will provide educational information on the natural history of these species, reporting sightings, required mitigation measures to avoid impacts, and penalties for not complying with biological mitigation requirements. All project personnel will be required to receive training before they start working.

BIO-4: Elderberry Mitigation

The following measures are subject to and contingent upon a Section 7 consultation with the USFWS. Reclamation will implement the following measures proposed in the USFWS 1999 VELB Conservation Guidelines (VELB Guidelines) (USFWS 1999).

Where possible, complete avoidance of elderberry shrubs would be enforced. Avoidance measures would include the establishment and maintenance of a 100 foot buffer zone surrounding elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level. The proposed staging area and access roads contain elderberry shrubs that would be within 20 feet of project activities; however, these shrubs are currently exposed to ongoing O&M activities by Reclamation that are similar to the Proposed Action. All elderberry shrubs within 20 feet of construction activities will be flagged or fenced for easy identification. Construction crews will be briefed on the need to avoid elderberry shrubs and no vehicles will enter within the 20 foot buffer zone.

Additionally, the following dust control measures will be implemented:

- Water or otherwise stabilize the soil prior to ground disturbance;
- Cover haul trucks;
- Employ speed limits on unpaved roads;

- Apply dust suppressants;
- Physically stabilize soil with vegetation, gravel, recrushed/recycled asphalt or other forms of physical stabilization;
- Reduce number of vehicle trips;
- Install one or more grizzlies, gravel pads, and/or wash down pads adjacent to the entrance of a paved public roadway to control carry-out and trackout;
- Minimize vegetation clearing; and
- Revegetate post-construction.

Elderberry shrubs that cannot be avoided would be transplanted if technically feasible. All elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level would be transplanted to a USFWS approved conservation area between November 1 and February 15.

Each elderberry shrub with stem measuring 1.0 inch or greater in diameter at ground level that is adversely affected would be compensated with elderberry seedlings or cuttings in accordance with the VELB Guidelines. Elderberry shrubs that cannot be feasibly transplanted will be compensated at a ratio two-times the normal amount. A minimum survival rate of at least 60 percent of the elderberry shrubs would be maintained throughout the monitoring period. If survival drops below this level, additional seedlings would be planted. Stock for plantings would be obtained from local sources.

Native plants associated with elderberry shrubs at the project area or similar reference sites would be planted in accordance with the VELB Guidelines. A minimum survival rate of at least 60 percent of the associated native plants would be maintained throughout the monitoring period. If survival drops below this level, additional seedlings or cuttings would be planted. Only stock from local sources would be used, unless such stock is not available, per the VELB Guidelines.

BIO-5: Conduct California Red-Legged Frog Surveys

Prior to project construction, a USFWS-approved biologist would conduct surveys to ensure no California red-legged frogs are present within or near the project area. If any California red-legged frogs are observed within or near the project area, Reclamation will reconsult with USFWS.

BIO-6: Conduct Nesting Bird Surveys, Roosting Bat Surveys, and Establish No-Disturbance Buffers, as Appropriate, for Special-Status Species

If construction activities must occur during the breeding season for special-status birds and/or bats (February 1–August 31), the following measures will be implemented:

Retain a qualified wildlife biologist who is experienced in identifying special-status birds and bats and their habitat to conduct nesting-bird surveys and bat roosting surveys in and within 500 feet of the project site. These surveys must be conducted within one week prior to initiation of construction activities at any time between February 1 and August 31.

If no active nests or roosts are detected during surveys, then no additional minimization measures are required.

If special-status birds or bats are found in the construction area or in the adjacent surveyed area, a no-disturbance buffer will be established around the nesting/roosting location to avoid disturbance or destruction of the nest site/roost site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late-June through mid-July). The extent of these buffers will be determined by a wildlife biologist in consultation with the applicable resource agencies (i.e., USFWS and/or CDFG) and will depend on the level of noise or construction disturbance, line of site between the nest/roost and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors will be analyzed and used by a qualified wildlife biologist to assist the USFWS and/or CDFG in making an appropriate decision on buffer distances.

BIO-7: Conduct Brandagee Clarkia Surveys

Prior to project construction, a qualified biologist would conduct surveys to ensure no Brandagee clarkia plants are present within or near the project area.

3.4.5 Cumulative Effects

Although construction of new CCAO facilities would lead to biological resource impacts, these impacts would be reduced by minimization measures discussed above. The California Health Care Facility, New Folsom Bridge Project, Raw Water Pipeline Bypass Project, and Folsom Dam Safety and Flood Damage Reduction Project would also have the potential to impact biological resources. Although the projects are occurring concurrently, all will employ minimization measures to reduce impacts. Because all of the projects will minimize impacts as needed and required, there would be no cumulatively considerable impacts on biological resources.

3.5 Geology and Soils

This section presents the affected environment and environmental consequences for geology and soils.

3.5.1 Regulatory Setting

This section describes applicable geology and soils laws and regulations.

Clean Water Act

The CWA includes provisions for reducing soil erosion relevant to water quality. The CWA made it unlawful for any person to discharge any pollutant from a point source (including construction site), into navigable waters, unless a permit was obtained under its provisions. This pertains to construction sites where soil erosion and storm runoff could affect downstream water quality. As discussed above under Water Resources, the NPDES process, established by the CWA, is intended to meet the goal of preventing or reducing pollutant runoff. Projects involving construction activities (e.g., clearing, grading, or excavation) that would disturb an area greater than one acre, must obtain a State General Permit for Storm Water Discharges Associated with Construction Activity and prepare a SWPPP.

Clean Air Act

The Federal CAA also includes provisions for reducing soil erosion relevant to air and water quality. On construction sites, exposed soil surfaces are vulnerable to wind erosion and small soil particulates are carried into the atmosphere. Suspended particulate matter (PM₁₀ and PM_{2.5}) is one of the six criteria air pollutants of the CAA.

Asbestos Airborne Toxic Control Measure

The Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (See Title 17 CCR Section 93105) contains the requirements for construction operations that would disturb any portion of an area that is located in a geographic ultramafic rock unit or that has naturally-occurring asbestos, serpentine, or ultramafic rock. Construction or grading operations on property where the area to be disturbed is greater than one acre, require an Asbestos Dust Mitigation Plan to be submitted and approved by the air quality management district before the start of construction. The Asbestos Dust Mitigation Plan must be implemented at the beginning and must be maintained throughout the duration of the operation. In order to receive an exemption from this Airborne Toxic Control Measure, a registered geologist must conduct a geologic evaluation of the property and determine that no serpentine or ultramafic rock is likely to be found in the area to be disturbed. This report must be presented to the executive officer or air pollution control officer of the air pollution control or air quality management district, who may then grant or deny the exemption.

3.5.2 Affected Environment

No seismic issues or unstable soils occur in the project area. The potential for landslides is low because of relatively thin soils. Although the Bear Mountain fault occurs north of the project area, this fault has not been designated as active by the U.S. Geological Survey and the ground shaking potential for the region is generally low.

3.5.3 Environmental Consequences

This section presents the environmental consequences of the Proposed Action and the No Action Alternative.

3.5.3.1 No Action Alternative

Under the No Action Alternative, no new buildings would be constructed. There would be no changes to geology or soils; therefore there would be no impacts.

3.5.3.2 Proposed Action

Construction of the new CCAO facilities would likely require several areas to be cleared and graded in preparation for construction of the new buildings. As part of the clearing and grading, a small quantity of topsoil would need to be removed. This soil would likely be re-used or disposed of on Federal property. During construction, temporary erosion may occur in areas that have been cleared and graded. The minimization measures described above for Water Resources would require implementation of a SWPPP that would include BMPs to reduce erosion and stormwater runoff. Additionally, water trucks would be used to wet the soils throughout construction to minimize dust. With proper implementation of the SWPPP and use of water trucks, impacts associated with loss of soil are expected to be minimal. After building construction is complete, xeric landscaping would be used to revegetate the remaining disturbed areas.

According to the Department of Conservation, California Geological Survey's Relative Likelihood for the Presence of Naturally Occurring Asbestos in Eastern Sacramento County (2006), the location for the Proposed Action does not contain naturally occurring asbestos. There would be no naturally occurring asbestos impacts from implementation of the Proposed Action.

3.5.4 Minimization Measures

Minimization Measure WQ-1 described in Water Resources in Section 3.2.4 would minimize impacts to geology and soils.

3.5.5 Cumulative Effects

While several proposed or ongoing projects in the area (California Health Care Facility, New Folsom Bridge, Folsom Dam Safety and Flood Damage Reduction Project, Raw Water Pipeline Bypass Project) could result in soil erosion and loss of

topsoil, each of these projects will implement project-specific mitigation, including a SWPPP (as required by the NPDES General Construction permit) that would help to reduce erosion and stormwater runoff. Because all projects will mitigate for their potential effects, the cumulative effects on geology and soils would be insignificant.

3.6 Visual Resources

This section presents the affected environment, and environmental consequences for visual resources.

3.6.1 Regulatory Setting

There are no specific laws or regulations that pertain to visual resources.

3.6.2 Affected Environment

The CCAO Headquarters is below Right Wing Dam and is not visible by the public due to the varying topography and vegetation of the area. The CCAO Headquarters area consists of various administrative and maintenance buildings, roads, and paved areas. The area surrounding the CCAO Headquarter buildings contain stands of natural vegetation. The proposed location for the new Maintenance Center currently contains a gravel parking lot and has existing views of various maintenance sheds. The proposed location for the new Administrative Building is currently a paved area with several buildings that house Reclamation staff and equipment. Views from this location include various CCAO maintenance buildings and stands of native vegetation just beyond the buildings and paved areas. The project area is not considered a scenic visual resource.

3.6.3 Environmental Consequences

This section presents the environmental consequences of the Proposed Action and the No Action Alternative.

3.6.2.1 No Action Alternative

Under the No Action Alternative, there would be no new buildings constructed. Views would remain the same as the affected environment. There would be no impacts to visual resources.

3.6.2.2 Proposed Action

Temporary Construction-Related Visual Impacts

Construction of the Proposed Action would occur in two stages and would require demolition of several existing buildings and construction of two new buildings. Throughout construction, workers, equipment, and vehicles would be visible to the CCAO staff and visitors. Because these visual impacts would be temporary, they are considered insubstantial and would not require minimization measures.

Permanent Visual Impacts

The Proposed Action consists of removing approximately 15 buildings of various sizes and the replacement of these buildings with a new Maintenance Center and Administration Building. The proposed Administration Building would be located in a paved area where several buildings currently exist (but would be removed prior to construction). The building would be designed to blend in with the current landscape. New trees and xeric landscaping would be installed to provide visual relief, shade, and screening of new parking areas.

The proposed Maintenance Center would be constructed in a gravel parking lot and would require the removal of some vegetation and grading around the perimeter of the parking lot. For a cleaner appearance, the office component of the Maintenance Center would be sited in the foreground, as seen from the access road, while visually screening the maintenance bays and service areas behind.

To improve the appearance of the CCAO's main entrance, the State's vehicle storage and maintenance center near the main gate would be visually screened with landformed earthen berms and plantings. Almost all existing trees and the outdoor picnic area would be preserved and protected during construction.

Because the area is not visible to the public and already contains various buildings, visual impacts of the Proposed Action are expected to be minimal. The Proposed Action would not substantially alter the existing visual character of the area, as it currently contains buildings, roads, and paved parking lots. The Proposed Action may actually be considered a visual improvement over the affected environment, because it would replace older buildings in various stages of disrepair with new buildings and would add new landscaping.

3.6.4 Minimization Measures

No minimization measures would be required.

3.6.5 Cumulative Effects

There are no other projects that would affect the visual character of the CCAO Headquarters. The Raw Water Pipeline Bypass Project would be constructed just north of the CCAO Headquarters, along Right Wing Dam. This project involves construction of a buried pipeline. All construction-related visual impacts would be temporary and are only partially visible from the CCAO Headquarters. No permanent visual impacts would occur (beyond two surge towers) as the pipeline would be buried. Cumulative effects with the Proposed Action and the Raw Water Pipeline Bypass Project are generally temporary and minimal.

3.7 Transportation and Circulation

This section presents the affected environment, and environmental consequences for traffic and circulation.

Because this is a building replacement project, no increase in Reclamation staff would occur and no long-term traffic volume increases or changes in traffic patterns are expected. Any incremental transportation impacts associated with implementation of the project are limited to the construction timeframe. The analysis presented in this section focuses on impacts occurring from, and during, construction activities.

3.7.1 Regulatory Setting

The evaluation of transportation impacts focuses on capacity analysis. In order to conduct capacity analysis, a measure of levels of service (LOS) is assigned to traffic facilities under various traffic flow conditions. The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM) (Transportation Research Board 2000). The concept of LOS is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A LOS definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Each of the local jurisdictions with roads in the project area has adopted LOS standards. Progressively worsening traffic conditions are given the letter grades “A” through “F”. While most motorists consider an “A”, “B”, “C” LOS as satisfactory, LOS “D” is considered marginally acceptable. Congestion and delay are considered unacceptable to most motorists and given the LOS “E” or “F” ratings.

The operating conditions for each level of service are provided below:

- *LOS A* describes conditions with little or no delay to motorists
- *LOS B* represents a desirable level with relatively low delay to motorists
- *LOS C* describes conditions with average delays to motorists
- *LOS D* describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range.
- *LOS E* represents operating conditions with high delay values. This level is considered by many agencies to be the limit of acceptable delay.
- *LOS F* is considered to be unacceptable to most drivers with high delay values that often occur, when arrival flow rates exceed the capacity of the intersection.

These LOS thresholds, reflected at the local jurisdiction level through the county and City General Plans, define the minimum levels of acceptable traffic conditions within the respective jurisdictions, typically LOS C or, in more urbanized areas, LOS D. Additional related thresholds are used to determine when changes in traffic conditions, such as that associated with additional traffic from a new development project, would result in a substantial impact to the local roadway system. Should a substantial impact be identified, the formulation of minimization measures for that impact is warranted. Table 3.7-1 presents the LOS standards and associated thresholds used in this environmental consequences analysis. In general, these standards are intended to measure the impacts and provide thresholds for permanent development projects; however, the CCAO BRP would not result in permanent increases in traffic on the local or regional roadways.

Table 3.7-1. Local and Regional LOS Standards and Thresholds

Entity	Standards	LOS Thresholds
City of Folsom	LOS C	If the “no project” LOS is LOS C or better and the project-generated traffic causes the intersection level of service to degrade to worse than LOS C (i.e., LOS D, E or F) then the Proposed Action must implement mitigation measures to return the intersection to LOS C or better. If the “no project” LOS is worse than LOS C (i.e., LOS D, E or F) and the project-generated traffic causes the overall average delay value at the intersection to increase by five seconds or more, mitigation measures must be implemented to improve the intersection to the “no project” condition or better. It is not necessary to improve the intersection to LOS C. If the “no project” LOS is worse than LOS C (i.e., LOS D, E, or F) and the project-generated traffic causes the overall delay value at the intersection to increase by less than five seconds, then the traffic impact is considered less than significant and no mitigation is required.
Placer County	LOS C on rural roadways, except within one-half mile of state highways where the standard shall be LOS D. LOS C on urban/suburban roadways except within one-half mile of state highways where the standard shall be LOS D.	Require mitigation to LOS C unless an intersection is within one-half mile of a State Highway, in which case the LOS standard is “D”. This applies where the existing LOS is at these levels, or better. If the LOS is worse than these standards, seek to mitigate impacts back to the existing level.

Source: Placer County General Plan 1994; City of Folsom General Plan 1993

3.7.2 Affected Environment

The local access routes analyzed in detail in this section are within the jurisdictions of Placer County (including the Community of Granite Bay) and the City of Folsom (Table 3.7-2). Regional roadways in the vicinity of the project area are under the jurisdiction of Sacramento County and the City of Roseville. While there is a description of the regional transportation routes and traffic patterns involved in this

project, the focus of the analysis is limited to the immediate area of Auburn-Folsom Road and related intersections, described in detail in the following sections.

Table 3.7-2. Direct Local Access Routes to CCAO Building Replacement Site

Intersections with Auburn-Folsom Road	City	County	Jurisdiction
Greenback Lane to Pinebrook Drive (excluding Reclamation Visitor Center Access Road)	City of Folsom	Sacramento County	City of Folsom
Oak Leaf Way at Beal's Point to Douglas Boulevard	City of Roseville	Placer County	Placer County

Source: Reclamation 2006

The project area is primarily suburban, low-density development. Transportation facilities and services include interstate and state highways, local roads and streets, local transit including local bus service and a light rail line from the City of Folsom to downtown Sacramento. Also, a number of bike paths/routes accompany major roads. Finally, a number of commuter bus services are provided within the counties and cities in the area.

Access to the proposed work site would only occur at the intersection of Auburn-Folsom Road and the Reclamation Visitor Center Access Road located north of the Folsom Dam Road intersection and south of the Pinebrook Drive intersection.

Increases in traffic would be limited during construction both in total quantity and in duration, given the temporary nature of construction. Therefore, the evaluation of potential transportation impacts focuses on the stretch of Auburn-Folsom Road in the project vicinity as well as intersections to the north and south with the potential to be affected (Figure 3.7-1 shows these local roads). Each of these roadways and intersections is described in more detail below.

Roadway Segments:

- Auburn-Folsom Road – Douglas Blvd. to Eureka Rd.
- Auburn-Folsom Road – Eureka Rd. to Oak Hill Dr.
- Folsom-Auburn Road – Oak Hill Dr. to Reclamation Visitors Center Rd.

- Folsom-Auburn Road – Reclamation Visitors Center Rd. to Inwood Rd.
- Folsom-Auburn Road – Inwood Rd. to Oak Ave. Pkwy.
- Folsom-Auburn Road – Oak Ave. Pkwy to Greenback Ln.

Intersections:

- Auburn-Folsom Road/Douglas Blvd.
- Auburn-Folsom Road/Eureka Rd.
- Auburn-Folsom Road/Oak Hill Dr. (Oak Leaf Way)
- Auburn-Folsom Road/Pinebrook Dr.
- Folsom-Auburn Road/Reclamation Visitors Center Rd.
- Folsom-Auburn Road/Inwood Rd.
- Folsom-Auburn Road/Folsom Dam Bridge connection
- Folsom-Auburn Road/Oak Ave. Pkwy.
- Folsom-Auburn Road/Greenback Ln.

Figure 3.7-1 shows the local roadways and intersections that would be used for construction materials and worker commutes, as well as the regional setting of these roads. These roads and intersections are described in detail in the following sections.

Local Access Route Descriptions

Folsom-Auburn Road/Folsom Boulevard

Auburn-Folsom Road is functionally classified as an undivided arterial and provides north-south access between the cities of Auburn to the north and Folsom to the south. North of the Placer County line, this roadway is called Auburn-Folsom Road. Between the county line and Greenback Lane/Riley Street, this roadway is called Folsom-Auburn Road.

Beginning at the intersection of Greenback Lane/Riley Street/Folsom Boulevard, Auburn-Folsom Road is a four lane divided roadway. Heading north, Auburn-Folsom Road continues with two lanes in each direction, becoming an undivided roadway outside of the City of Folsom limits, to its intersection with Folsom Dam Road. Continuing north, the road narrows to one lane in each direction, crosses the Sacramento/Placer County line, and remains a two-lane undivided roadway to the Douglas Boulevard intersection. The speed limit varies from 40 to 50 miles per hour

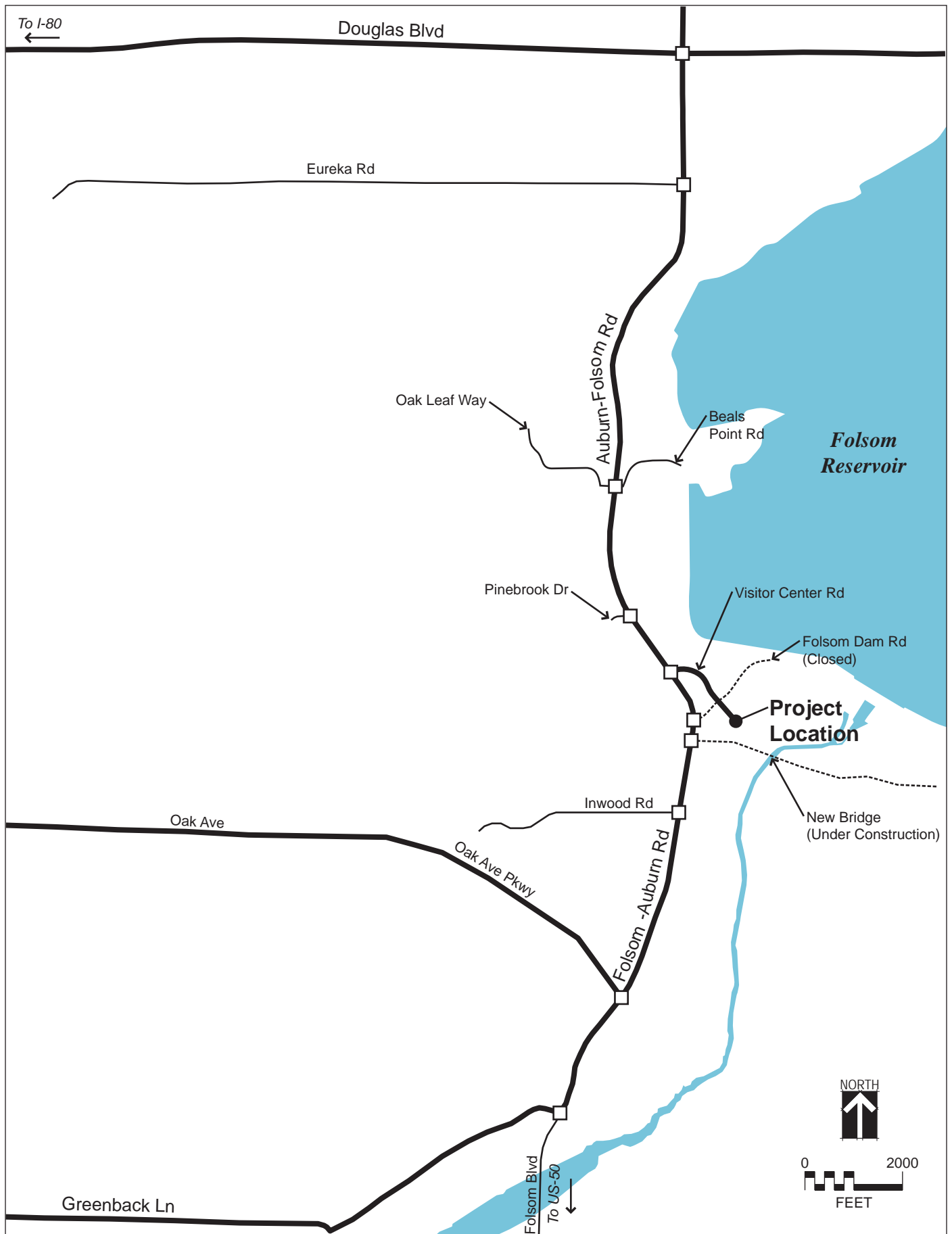


Figure 3.7-1
Proposed Action Area Roadways

(mph). Land use along Auburn-Folsom Road is mixed; commercial, residential, and light industrial; however, in downtown Folsom the land use becomes mainly commercial.

Data for the existing operations of major intersections in the Proposed Action vicinity comes from traffic operations analysis conducted as part of the Bridge EIS/EIR and the Folsom Dam Safety and Flood Damage Reduction Draft EIS/EIR. Intersections with the potential to be affected by the implementation of the project alternative include:

Folsom-Auburn Road at Greenback Lane

The Folsom Boulevard/Auburn-Folsom Road at Greenback Lane intersection flow is comprised of four approaches. The northbound approach on Folsom Boulevard (on the American River Bridge) has two exclusive left turn lanes, two through lanes, and a right turn lane. The Auburn-Folsom Road southbound approach and Greenback Lane westbound approaches consist of an exclusive left turn lane, two through lanes, and a right turn lane. The eastbound Greenback Lane approach lane configuration is two exclusive left turn lanes, one through lane, and a channelized right turn lane. Greenback Lane eastbound has a marked bicycle lane on the south side of the roadway. Pedestrian crosswalks are provided on all four intersection approaches and include pedestrian pushbuttons. The intersection is signalized. The intersection currently experiences a LOS F during the peak hour periods

Folsom-Auburn Road at Oak Avenue

The intersection of Auburn-Folsom Road at Oak Avenue Parkway consists of four intersection approaches. The Auburn-Folsom Road approaches both have an exclusive left turn lane and two through lanes. The Oak Avenue Parkway approaches both have a single shared lane. Pedestrian crosswalks are provided across the Auburn-Folsom Road approaches with pedestrian pushbuttons and signal heads; however, there are no sidewalks present within the vicinity of the intersection. The intersection of Auburn-Folsom Road at Oak Avenue Parkway is signalized. This intersection currently experiences a LOS D during the peak hour periods.

Folsom Bridge (East Natoma Street and Auburn-Folsom Road)

This bridge, the subject of the Folsom Dam Raise/Folsom Bridge Draft Supplemental EIS/EIR, May 2006, is currently under construction with an anticipated opening date of 2009. The new bridge is planned to have four lanes for traffic plus bike lanes (Class I and Class II) running east and west. The intersection of Folsom Bridge and Auburn-Folsom Road will consist of three intersection approaches.

Auburn-Folsom Road at Inwood Road

The traffic flow at this intersection consists of three intersection approaches. The Auburn-Folsom Road northbound approach has an exclusive left turn lane and two through lanes. The Auburn-Folsom southbound approach has two lanes, one through and one shared through/right. Inwood Road comes into the intersection from the west with an exclusive left turn lane and an exclusive right turn lane. There are no sidewalks present in the vicinity of the Auburn-Folsom Road at Inwood Road intersection; however, pedestrian crosswalks are present across the northbound and eastbound approaches. The intersection is signalized. Recent capacity analysis data for this intersection were not evident.

Auburn-Folsom Road at Reclamation Visitors Center Road

The Auburn-Folsom Road at Reclamation Visitors Center Road consists of three approaches. The Auburn-Folsom southbound approach has two through lanes and an exclusive left turn lane. The Auburn-Folsom northbound approach has two lanes, one through and one shared through/right. The Reclamation Visitor's Center Road comes into the intersection from the east with an exclusive left turn lane and a shared through/right turn lane. The intersection is signalized. Recent capacity analysis data for this intersection were not evident.

Auburn-Folsom Road at Pinebrook Drive

The Auburn-Folsom Road at Pinebrook Drive intersection traffic flow consists of four approaches; three approaches are roadways, the fourth a driveway. The Auburn-Folsom Road northbound approach has an exclusive left turn lane and one through lane. The Auburn-Folsom Road southbound approach consists of a through lane and an exclusive right turn lane. The Pinebrook Drive approach lane configuration is one exclusive left turn lane and one right turn lane. There are no marked pedestrian crosswalks; however, there is a short section of sidewalk on the Auburn-Folsom Road southbound approach that connects Pinebrook Road to the commercial property to the north. The intersection is signalized. Recent capacity analysis data for this intersection were not evident.

Auburn-Folsom Road at Oak Leaf Way and Beal's Point Road

The intersection is comprised of four approaches. Auburn-Folsom Road northbound consists of an exclusive left turn lane and one through lane. The southbound Auburn-Folsom Road approach has an exclusive left turn lane, one through lane, and a right turn lane. Oak Leaf Way comes into the intersection with a shared left/through lane and an exclusive right turn lane. Beal's Point Road consists of a single general use lane. Crosswalks are present across the northbound Auburn-Folsom Road, Oak Leaf Way, and Beal's Point Road approaches. There are no marked bicycle lanes or sidewalks within the vicinity of the intersection. The Auburn-Folsom Road at Oak Leaf Way/Beal's Point Road intersection is signalized.

This intersection was analyzed in the Folsom Bridge Draft Supplemental EIS/EIR and identified to have LOS B in the AM peak (7 a.m.-9 a.m.) and LOS C in the PM peak (4 p.m. – 6p.m.).

Auburn-Folsom Road at Eureka Road

The Auburn-Folsom Road at Eureka Road intersection has four approaches; three roadway approaches and one driveway access. The northbound approach on Auburn-Folsom Road consists of an exclusive left turn lane and a through lane; southbound consists of an exclusive left turn lane, one through lane, and an exclusive right turn lane. The Eureka Road approach from the west has a shared left/through lane and an exclusive right turn lane. A driveway access is directly across the intersection from Eureka Road. Pedestrian crosswalks are provided across the Auburn-Folsom Road northbound approach and the Eureka Road approach. There are no sidewalks within the vicinity of the intersection. The Auburn-Folsom Road at Eureka Road intersection is signalized. This intersection currently experiences a LOS B during the peak hour periods.

Auburn-Folsom Road at Douglas Boulevard

The Auburn-Folsom Road at Douglas Boulevard intersection is comprised of four intersection approaches. The Auburn-Folsom Road southbound, and both Douglas Boulevard approaches, consists of one exclusive left turn lane, two shared through lanes, and an exclusive channelized right turn lane. The Auburn-Folsom Road northbound approach consists of an exclusive left turn lane, one shared left/through lane, one through lane, and exclusive channelized right turn lane. All four approaches have sidewalks present on both sides in the vicinity of the intersection. Pedestrian access is provided by crosswalks from each corner of the intersection to the channelization islands; and across each leg of the intersection from island to island. Pedestrian pushbuttons and signal heads are provided for all crossings. The intersection is signalized. This intersection currently experiences a LOS D during the peak hour periods.

Off-Site Materials Delivery Routes

During construction, materials would need to be delivered to the site from off-site sources. The exact source of the materials would be determined by the contractor at a later date. This analysis assumes that all materials would arrive from south of the project area and connect to regional Route 50 and Folsom Boulevard, which turns into Folsom-Auburn Road.

3.7.1.3 Existing Traffic Volumes

Traffic count data (derived from the Bridge EIS/EIR) was collected on Tuesdays, Wednesdays, or Thursdays. The peak hour traffic volumes were counted during the a.m. (7:00 to 9:00) and p.m. (4:00 to 6:00) peak periods (Corps 2006). In cases

where 2004 traffic counts were not available, either historical counts (2002 or 2003) were factored up to 2004 conditions based on historic growth rates in the transportation study area or the daily volume was estimated from peak hour counts. Table 3.7-3 summarizes the traffic volumes (measured in Average Daily Trips (ADT)) and most-current LOS for the portion of Auburn-Folsom Road in this analysis.

Table 3.7-3. Existing Roadway Segment Traffic Volume Data (2004)

Roadway	Location	Functional Class	ADT (2004)	LOS
Folsom-Auburn Road	Oak Hill Drive to Folsom Dam Road	2A	31,300 ¹	F
Folsom-Auburn Road	Folsom Dam Road to Oak Avenue	4AU	28,600 ¹	F
Auburn-Folsom Road	Douglas Boulevard to Eureka Road	2A	30,900 ¹	F
Auburn-Folsom Road	Eureka Road to Oak Hill Drive	2A	26,500	F
Source: Corps 2006.				
¹ ADT volume factored up to 2004 conditions from 2002 or 2003 data				

Volume data was combined with roadway information and LOS capacity thresholds (Table 3.7-4) in order to determine existing LOS for each transportation study area roadway segment. Intersection analysis was provided in terms of a.m. and p.m. peak hour LOS results

The City of Folsom's Traffic Department provided 2007 traffic counts for Folsom-Auburn Road at Oak Avenue Parkway. Measured in June 2007, the total daily count was 37,077 at this point (Personal Communication, Reed 2008).

Placer County's Traffic Engineering Department provided traffic count data from 2007 along Auburn-Folsom Road, just south of Douglas Boulevard. The ADT averaged from a three day count was 25,321 (Personal Communication, Rose 2008).

A V/C value of less than 1.0 indicates that the ADT is less than the capacity, whereas a V/C value greater than 1.0 indicates that the roadway volume is greater than the roadway capacity.

Table 3.7-4. Existing Intersection LOS (2004)

Intersection ¹	AM Peak		PM Peak	
	Delay (sec/vehicle) V/C ²	LOS	Delay (sec/vehicle) V/C	LOS
Auburn-Folsom Rd/Douglas Blvd.	40.9	D	37.7	D
Auburn-Folsom Rd/Eureka Rd	19.3	B	14.7	B
Auburn-Folsom Rd/Oak Hill Dr	13.6	B	20.1	C
Folsom-Auburn Rd/Oak Ave	39.6	D	36.7	D
Folsom-Auburn Rd/Greenback Ln	>80.0 1.32	F	>80.0 1.11	F

Source: Fehr & Peers 2005, as cited in Corps 2006

¹All study intersections are signalized

²V/C – volume to capacity ratio is reported only under LOS F conditions.

Bold indicates intersections that are influenced by adjacent intersections. Actual delays and LOS may be worse.

The *Folsom Dam Safety and Flood Damage Reduction Draft EIS/EIR* estimated 2008 traffic conditions (calculated in Average Daily Trips, with an assumed background growth of 3 percent per year) along local routes. This data is presented in Table 3.7-5 below.

Table 3.7-5. Projected Future Traffic Volume Conditions (2008)

Roadway	Location	ADT	Code	LOS
Folsom-Auburn Road	Oak Hill Drive to Folsom Dam Road	41,509	4AU	F
Folsom-Auburn Road	Folsom Dam Road to Oak Avenue	22,042	4AU	D
Auburn-Folsom Road	Douglas Boulevard to Eureka Road	35,329	4AU	F
Auburn-Folsom Road	Eureka Road to Oak Hill Drive	31,415	2A	F

Source: Reclamation 2006

Access Route Incident (Collision) History

In order to determine possible safety concerns along local access routes, incident or collision history data was used from the *Folsom Dam Safety and Flood Damage Reduction Draft EIS/EIR*. Both collision rates and the Hundred Million Vehicle

Miles traveled (HMVM) crash rate were obtained from data in the Folsom Dam Safety and Flood Reduction Project Draft EIR/EIS (2006), since the CCAO BRP study area is contained in the study area of this previous document.

The purpose of including this data is to identify routes that may currently experience safety concerns as demonstrated by a high number of incidents. If a section of an access route currently experiences substantial safety concerns, the corridor would be ruled out as a construction access route to avoid potential increases in collisions due to the construction traffic from the CCAO BRP. In the case that there are no alternative routes available, the lead agency of the Proposed Action may provide safety improvements as minimization measures.

Collision rates at individual intersections were not calculated. Instead, the intersection collision numbers were included in the corridor collision rates. Including these collisions within the calculation would cause the corridor collision rate to be higher; however, it helps represent a conservative value for each roadway.

Crash rates were calculated in the Folsom Dam Safety and Flood Reduction Draft EIR/EIS for roadway segments based on HMVM as follows:

$$\text{HMVM} = (A \times 100,000,000) / (\text{ADT} \times D \times L)$$

ADT = Average Daily Traffic

A = number of total crashes at the study location during a given period

D = number of days in the study period

L = length of study location in miles

The results of these calculations are summarized in Table 3.7-6.

The U.S. Department of Transportation's Research and Innovative Technology Administration produces National Transportation Statistics for the U.S. transportation system. The most recent data estimates a national average crash rate of 198 crashes per hundred million vehicle miles traveled in 2006. Thus, any rate higher than 198 may be indicative of a safety concern. A review of the collision data indicates that the following roadways may pose potential safety concerns relative to the selection of haul routes:

- Auburn-Folsom Road – Oak Hill Drive to Folsom Dam Road; and
- Auburn – Folsom Road – Folsom Dam Road to Oak Avenue.

Table 3.7-6. Accident History – Corridor Collision Rate

Roadway	Location	2006 Data			
		ADT	Accidents ¹	Length of Roadway Section (miles)	Accident Rate ²
Auburn-Folsom Road	Oak Hill Drive to Folsom Dam Road	32, 292	162	2.20	208.25
Auburn-Folsom Road	Folsom Dam Road to Oak Avenue	29,591			
Auburn-Folsom Road	Douglas Boulevard to Eureka Road	31,563	88	1.76	144.67
Auburn-Folsom Road	Eureka Road to Oak Hill Drive	27,097			

Source: Reclamation 2006

¹Accident totals represent most recent 3-years of available information

²Accident rate is skewed high due to accidents at intersections being included in the calculation

3.7.3 Environmental Consequences

This section presents the environmental consequences of the Proposed Action and the No Action Alternative.

3.7.3.1 Analysis Methodology

The roadway study segments were analyzed using the procedures and methodology in the Transportation Research Board's *Highway Capacity Manual* (HCM) 2000. Roadway segment LOS is calculated based on functional classification (type of roadway), number of lanes, and daily traffic volumes. Table 3.7-7 lists the functional class and LOS thresholds commonly used to define the service level of roadways.

Intersection LOS is based on the intersection turn lane configuration, type of traffic control (signal or stop sign), and peak-hour traffic volumes. All of the intersections are controlled by traffic signals, and many of the signals are operated as a system. This analysis is based on the findings of the Bridge EIS/EIR, which used SYNCHRO 6.0 software to analyze intersections in the study area. Control delay is the quantitative performance measure upon which LOS is determined. Table 3.7-8 summarizes the ranges of control delay assigned to each LOS threshold for signalized intersections.

Table 3.7-7. Functional Class and Daily Roadway Segment LOS Threshold

Functional Class	Code	LOS Capacity Threshold (Total Vehicles per day in both directions)				
		A	B	C	D	E
2-Lane Collector	2C	-	-	5,700	9,000	9,800
Minor 2-Lane Highway	MI2	900	2,000	6,800	14,100	17,400
Major 2-Lane Highway	MA2	1,200	2,900	7,900	16,000	20,500
4-Lane, Multilane Highway	MH4	10,700	17,600	25,300	32,800	36,500
2-Lane Arterial	2A	-	-	9,700	17,600	18,700
4-Lane Arterial, Undivided	4AU	-	-	17,500	27,400	28,900
4-Lane Arterial, Divided	4AD	-	-	19,200	35,400	37,400
6-Lane Arterial, Divided	6AD	-	-	27,100	53,200	56,000
8-Lane Arterial, Divided	8AD	-	-	37,200	71,100	74,700
2-Lane Arterial, moderate access control	2AMD	10,800	12,600	14,400	16,200	18,000
4-Lane Arterial, moderate access control	4AMD	21,600	25,200	28,800	32,400	36,000
6-Lane Arterial, moderate access control	6AMD	32,400	37,800	43,200	48,600	54,000
4-Lane Arterial, high access control	4AHD	24,000	28,000	32,000	36,000	40,000
6-Lane Arterial, high access control	6AHD	36,000	42,000	48,000	54,000	60,000
4-Lane Freeway	4F	22,200	40,200	57,600	71,400	80,200
4-Lane Freeway with Auxiliary Lanes	4FA	28,200	51,000	72,800	89,800	100,700

Source: Corps 2006

The following assumptions were made in relation to regional transportation when completing this evaluation:

- Trucks transporting construction materials to the proposed construction site would originate from an estimated 20 miles away from the proposed construction site, and would travel on regional highways eventually connecting Highway 50 and then Folsom Boulevard leading to Auburn-Folsom Road.

Table 3.7-8. Signalized Intersection LOS Criteria

LOS	Control Delay per Vehicle (Seconds)
A	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤80.0
F	>80.0

Source: Transportation Research Board 2000

- Materials (e.g. aggregate base and sand) exported offsite would be hauled approximately 20 miles to L&D Landfill, travelling south along Folsom-Auburn Road to Highway 50 and then to Sacramento. This construction traffic would impact the stretch of Auburn-Folsom Road from Greenback Lane to the Reclamation Visitors Center Road.
- Construction personnel, of which there would be approximately a total of 25 (50 daily trips) at times of peak construction (during building erection and interior finish and final mechanical/electrical work), would come 50% from north and 50% from south of the reservoir. Routes for those originating south of the reservoir would be the same as the construction materials trucks, and would impact local routes on Auburn-Folsom Road from Greenback Lane to the Reclamation Visitors Center Road. Routes for those originating north of the reservoir will connect to Interstate-80 west and then to Douglas Boulevard (via Eureka Road) leading towards Auburn-Folsom Road. This construction traffic would impact the stretch of Auburn-Folsom Road from Douglas Boulevard to the Reclamation Visitors Center Road.

Analysis of the Proposed Action was conducted using local LOS thresholds and mitigation requirements. As summarized in Table 3.7-7, operational traffic impacts in the City of Folsom require mitigation in the case that the intersection LOS drops from an LOS C (or better) to worse than an LOS C. If the “no project” LOS is worse than LOS C, the significance threshold is measured in the increase of seconds of delay experienced at the intersection. Minimization measures would be required if project-generated traffic would cause an increase of five seconds or more in the overall average delay value. Minimization measures must improve the LOS to the “no project” condition or better. If the overall average delay increases by less than five seconds, the impact is considered insignificant.

Placer County requires mitigation of operational traffic impacts to return an intersection to an LOS C. In the case that the intersection is within one-half mile of a State Highway, mitigation is required to LOS D. This applies if the “no project” LOS is at these levels, or better. If the “no project” LOS is worse than C or D, mitigation must be sought to return the intersection to the existing level.

3.7.3.1 No Action Alternative

Under the No Action Alternative, the CCAO BRP would not be implemented. No construction activities would occur. There would be no traffic impacts under the No Action Alternative.

3.7.3.2 Proposed Action

The Proposed Action involves the replacement of existing maintenance and administrative facilities at the CCAO Headquarters in Folsom, California. In total, two new buildings would be constructed; a Maintenance Center and Administration

Building. The Proposed Action also includes the creation of two new parking lots to accommodate Reclamation staff and visitors; however, there would be no expected increase in traffic to the site after construction. Construction is expected to start in October 2009 and would last until September 2011.

Table 3.7-9 describes the main construction activities, trucks used that would be travelling on local roadways, and the estimated number of days these vehicles would be in use.

Table 3.7-9: Construction Phases and Time for Completion

Activity	Description	Type of Vehicles Used	Total Work Days in Use
Mobilization, Demolition, and Utility Relocation	Mobilize equipment and office facilities to the site. The existing buildings that are required to be demolished will be removed, the building site stripped, and utilities relocated.	Water Truck	11
		10 ton flatbed truck	11
		Concrete transit Mixer	--
		Dump truck	11
Excavation, Backfill, and Site Grading	Excavate and backfill the building pad. The initial site grading will also be accomplished.	Water Truck	26
		10 ton flatbed truck	26
		Concrete transit mixer	--
		Dump truck	20
Building Erection	Building foundation excavated and the concrete grade beams and floor slabs are placed. The metal building frame, siding, and roof components are erected. The building is also weathered in.	Water truck	--
		10 ton flatbed truck	82
		Concrete transit mixer	8
		Dump truck	--
Interior Finish and Final Mechanical and Electrical	Building interior finished out. The buildings mechanical and electrical systems installed	Water truck	--
		10 ton flatbed truck	5
		Concrete transit mixer	--
		Dump truck	--
Final Grading, Paving, Landscaping, Utility Hook-up, and Demobilization	Final site grading, installing curbs and sidewalks, and paving occur. The landscaping installed and final hook-up of utilities is completed.	Water truck	15
		10 ton flatbed truck	53
		Concrete transit mixer	4
		Dump truck	15

As described above, traffic impacts from the implementation of the Proposed Action would come from three sources; materials (e.g., aggregate base and sand) exported and imported to the proposed site; construction and demolition materials (including,

metal building frame, siding, and roof components) imported and exported to the proposed site; and, workers commuting to and from the site. A total of 3,600 cubic yards of materials would be required, resulting in 360 total truck trips. Materials that would be exported offsite include 265 cubic yards of concrete rubble and 60 loads of building debris. Using a 20 cubic yard dump truck, this would result in approximately 150 trips.

During peak construction it is anticipated that up to 25 workers would be travelling to and from the site each day, from up to 20 miles away. This would add an additional 50 trips per day to the site during peak construction and 30 or 40 trips per day during other periods of construction. The total peak construction-related traffic would add 60 trips per day on a section of Auburn-Folsom Road. This would result in an increase to existing traffic conditions along Auburn- Folsom Road as described in Table 3.7-10.

Table 3.7-10: Construction Impacts to ADT and LOS on Auburn-Folsom Road

Roadway	Location	Existing ADT (2004) ¹	Existing LOS	Project ADT (peak construction)	Project LOS	% ADT Increase
Folsom-Auburn Road	Oak Hill Drive to Folsom Dam Road	31,300	F	31,360	F	0.2%
Folsom-Auburn Road	Folsom Dam Road to Oak Avenue	28,600	F	28,660	F	0.2%
Auburn-Folsom Road	Douglas Boulevard to Eureka Road	30,900	F	30,960	F	0.2%
Auburn-Folsom Road	Eureka Road to Oak Hill Drive	26,500	F	26,560	F	0.2%

Source: 2004 Existing Traffic Volume Data and LOS from Corps 2006

The above analysis shows that construction activities would be expected to cause an increase in ADT of approximately 0.2 percent during peak construction (approximately 27 weeks in duration). Given that the current ADT is between 26,500 and 31,300 along Auburn-Folsom Road in the study area (LOS F), an increase of 0.2 percent would add a negligible difference in LOS.

The City of Folsom significance thresholds apply to long-term traffic impacts where project-generated traffic delays measure greater than five seconds. The traffic increases resulting from implementation of the Proposed Action would be temporary, lasting only the duration of construction activities. Using Placer County LOS significance thresholds, construction traffic impacts would be minimal. Every effort

will be made to accomplish the majority of truck trips during off-peak hours to avoid the highest levels of traffic on Proposed Action-area roadways. As stated previously, long-term operational traffic impacts from proposed construction of the CCAO buildings would be minimal. Given the significance thresholds of Placer County and the City of Folsom, traffic and circulation impacts would be considered minimal and minimization measures would not be required.

3.7.4 Minimization Measures

No Minimization Measures are required.

3.7.5 Cumulative Effects

Projects with the potential to specifically impact traffic and circulation in the project vicinity include the New Folsom Bridge, the Folsom Dam Safety and Flood Damage Reduction Project, the Raw Water Bypass Pipeline Project, and the California Health Care Facility.

The new Folsom Bridge Project is expected to be completed in the summer of 2009. If the new Folsom Bridge is completed before work on the CCAO BRP begins, the bridge would help to alleviate traffic congestion in the area and further reduce the potential for cumulative traffic impacts.

As described above in Table 3.7-7, existing traffic volumes on the roadways analyzed for the Proposed Action operate at LOS below local standards. Future growth projections are expected to add to current traffic volumes. The New Folsom Bridge is expected to increase the number of deficient roadway segments in the study area due to reduced travel times created by the new bridge and the fact that it will attract more trips into the study area. However, while traffic problems would continue in the study area, the bridge would be expected to provide additional roadway/bridge lanes to help accommodate traffic movement over the American River (Corps 2006). It is also anticipated that bridge operation would result in significant adverse impacts to five study area intersections.

Current planned and completed roadway segment and intersection improvements would help to minimize traffic impacts from expected background growth, New Bridge construction and the other construction projects taking place in the vicinity of the reservoir. Additionally, the expected introduction of light rail transit service in the Folsom Boulevard corridor could reduce traffic congestion at the Folsom Boulevard/Natoma Street intersection; however, the impact of this transit service has not been modeled.

Table 3.7-11 summarizes the roadway LOS effects, projected for 2007 and 2025, that were predicted after the operation of the new Folsom Bridge.

Table 3.7-11 Roadway LOS Significant Effects, Post-Bridge Operation

Roadway Segment	2007 Volume	2007 LOS	2025 Volume	2025 LOS
Auburn-Folsom Road – Douglas Boulevard to Eureka Road	34,300	F	51,700	F
Auburn-Folsom Road – Eureka Road to Oak Hill Drive	30,500	F	48,400	F
Folsom-Auburn Road – Oak Hill Drive to Folsom Dam Road	40,300	F	54,100	F

Source: Corps 2006

The CCAO BRP has the same anticipated construction start year as the Raw Water Pipeline Bypass Project. Traffic-related increases and impacts related to construction and operation of the CCAO BRP would add a minimal amount of vehicle trips to the local roadways in the project vicinity.

Construction of the Raw Water Pipeline Bypass Project is expected to start in the mid-to late-summer of 2009. During construction, overlap periods between the CCAO BRP and Bypass Pipeline Project, there would be approximately 185-200 trips per day along study area roadways. This would result in a combined increase in ADT of 0.6 to 0.7 percent. This is a minimal increase and would not result in significant impacts during the 5-6 month potential overlap between these projects.

In order to minimize cumulative impacts there would be close coordination on traffic and circulation issues between the lead agencies on all area projects. Due to these factors, the Proposed Action is not expected to contribute to any cumulatively considerable traffic impacts.

3.8 Noise

This section describes the affected environment and environmental consequences for noise. Noise includes any unwanted or objectionable sound. Increasing noise levels may cause adverse effects to humans and their environment. Noise impacts are associated with construction activities (short-term) and operations (long-term) of facilities.

3.8.1 Regulatory Setting

Most jurisdictions have adopted noise standards for both transportation and non-transportation noise sources in the Noise Elements of their General Plans. It is also appropriate to consider Federal and State traffic noise impact assessment criteria to evaluate haul truck noise impacts.

Federal Regulations

The United States Code of Federal Regulations Part 772 (23 CFR 772), “Procedures for Abatement of Highway Traffic Noise and Construction Noise,” establishes standards for mitigating highway traffic noise. The Noise Control Act of 1972 gives the USEPA the authority to establish noise regulations to control major sources of noise, including transportation vehicles and construction equipment (FHWA 1995). Later guidance, issued by the Federal Highway Administration (FHWA), including the Highway Construction Noise Handbook, updates the original techniques and methodology used to identify the impacts of and mitigation approaches appropriate for construction-related noise (FHWA 2006).

The USEPA guidelines suggest that on average, the residential outdoor noise level should be no more than 55 dBA, and the indoor level should be no more than 45 dBA, in order to protect against sleep disturbances, communication disruption, and hearing damage. The indoor level also applies to school, hospitals, and libraries. There are no guidelines that have been set for other areas (USEPA 1974).

The Federal Highway Administration (FHWA) established noise abatement criteria (NAC) in 23 CFR Part 227. These noise standards are based on specific land use categories and one-hour average L_{eq} noise levels. Table 3.8-1 presents these criteria.

Table 3.8-1. Federal Highway Administration Noise Abatement Criteria (NAC)

Activity Category	L_{eq} (1hr)¹ (dBA)	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extreme significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve intended purpose
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: 23 CFR Part 772

¹No single hourly average L_{eq} in a 24-hour day can exceed this value.

Land uses along the local haul and access routes, as described in Section 3.7 (Transportation and Circulation), are predominantly Activity Category B and C, and, to a lesser degree, Activity Category E (i.e., residential). The FHWA noise standards indicate that noise mitigation must be considered when the Horizon Year project levels approach or exceed the stated NAC. In the case that Future-Year or Horizon-Year project levels “substantially exceed existing noise levels, FHWA standards mandate mitigation. The Caltrans Traffic Noise Analysis Protocol (2006) defines “approach the noise abatement criteria” (23 CFR 772.5(g)) as 1 dBA below the NAC

and defines “substantially” as a predicted incremental impact equal to or greater than 12 dBA over existing noise levels.

23 CFR 772 requires that construction noise impacts be evaluated for all projects that fall under its jurisdiction (defined as Type I projects, new construction or reconstruction projects; and Type II projects, retrofit noise abatement projects). To perform an assessment of construction noise, land uses or activities that may be affected by construction noise from the project should be identified. While the regulations do not specify specific methods or abatement criteria for evaluating construction noise, Caltrans guidance states that a reasonable analysis method such as FHWA Roadway Construction Noise Model (FHWA 2006, the model is a windows-based screening tool that can be used to predict construction noise during various stages of project development and construction) should be used to determine construction induced noise impacts on land uses or activities in the project area (Caltrans 2006).

State Regulations

The State of California does not regulate noise directly. The State’s General Plan Guidelines dictate the preparation of general plans and noise ordinances at the city and county level. County general plans are required to include a Noise Element (State of California Government Code Section 65302 (f)).

Community Regulations

Existing conditions and community tolerance for noise dictate the normally acceptable community noise exposure, which is a term the State uses to specify satisfactory land uses in relation to noise exposure. Other terms used by the State are:

- Conditionally Acceptable: Prior to development, a detailed noise analysis should be prepared. Noise insulation should be included in the design.
- Normally Unacceptable: Construction should be discouraged. If development occurs, proper noise reduction should take place.
- Clearly Unacceptable: No construction or development should occur.

Table 3.8-2 displays land use categories and community noise exposure.

Table 3.8-2. Noise Compatible Land Use Planning

Land Use	Community Noise Exposure			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential-Low Density Single Family, Mobile Homes	50-60	55-70	70-75	75+
Residential-Multi-Family	50-65	60-70	70-75	75+
Transient Lodging-Motels, Hotels	50-65	60-70	70-75	75+
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-70	60-70	70-80	80+
Auditoriums, Concert Halls, Amphitheaters	N/A	50-70	N/A	65+
Sports Arena, Outdoor Spectator Sports	N/A	50-75	N/A	70+
Playgrounds, Neighborhood Parks	50-70	N/A	67-75	72+
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	N/A	70-80	80+
Office Buildings, Business	50-70	67-77	75+	N/A
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	75+	N/A

Source: Adapted from State of California Governor's Office of Planning and Research 1998

Jurisdictions in the study area also regulate noise generated by transportation sources according to land use. All of the jurisdictions along the haul routes have adopted a maximum L/CNEL noise limit of 60 dBA for residential land uses, with a potential allowable L/CNEL exceedance level of 65 dBA, in the case that 60 dBA is not practical in a situation given the application of the best-available noise reduction measures. Some of the jurisdictions have adopted a maximum L/CNEL noise limit of 70 dBA for playgrounds and parks. Table 3.8-3 summarizes these standards for all of the relevant jurisdictions.

Table 3.8-3. Local Government Transportation Noise Standards (dBA)

Noise Element Jurisdiction/Land Use Category	Maximum Allowable Noise Levels	
	Exterior L _{dn} /CNEL ¹	Interior L _{dn} /CNEL
Sacramento County		
Residential Areas	60	45
Placer County and Granite Bay Community²		
Residential areas	60	45
Commercial areas	--	
Other sensitive areas – Parks	70	
Other sensitive areas: hospitals, nursing homes, churches, transient lodging	60	45
City of Folsom		
Residential areas including single- or multiple-family residence, school, church, hospital, or public library	60	45

Source: Reclamation 2006

Notes: ¹The jurisdictions along the haul routes with standards for transportation noise impacts have adopted a maximum L_{dn}/CNEL noise limit of 60 dBA for residential land uses, with a potential allowable L_{dn}/CNEL exceedance level of 65 dBA, if 60 dBA is not practicable, in a situation given the application of best-available noise reduction measures.

²Interior spaces worst-case one hour L_{eq} noise standards of 35-45 dBA have been adopted for theaters, auditoriums, music halls, churches, meeting halls, office buildings, schools, libraries, and museums.

County and Local

All jurisdictions where construction or truck hauling would occur have adopted local ordinances regulating noise levels in order to minimize impacts on sensitive land uses. Such local standards have been established for both non-transportation and transportation noise sources. Table 3.8-3 lists the transportation noise standards in those jurisdictions where actions may involve trucks hauling materials. Each jurisdiction's noise ordinance is described in more detail below:

Placer County (including Granite Bay Community) Noise Ordinance

The Placer County Code (Chapter 9, Article 9.36) establishes sound limits for sensitive receptors. The ordinance specifies that is unlawful to create a sound that:

- Causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by five dBA.
- Exceeds the sound level standards, whichever is greater.

The County's sound level standards are summarized in Table 3.8-4.

Table 3.8-4. Placer County Sound Level Standards

Sound Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq} , dB	55	45
Maximum level, (L_{max}) dB	70	65

Source: Placer County Code, Article 9.36

In their General Plan, the county also adopted noise standards specific to non-transportation construction activities. These standards (Table 3.8-5) are based on maximum allowable L_{dn} noise levels.

Table 3.8-5. Placer County Non-Transportation Noise Standards, dBA

Receptor Area	L_{dn}
Residential Adjacent to Industrial	60
Other Residential	50
General Commercial	70
Heavy Commercial/Industrial Park	75
Recreation and Forestry	70
All Land uses interior allowable noise level	45

Source: Adapted from Placer County 1994

Placer County's noise standards are designed to protect against the development of new noise-sensitive uses where the noise of non-transportation sources will exceed the noise level standards. The Proposed Action would not be creating a new noise-sensitive use. The County's General Plan also states that noise produced by blasting or other impulsive noises should not be subject to the criteria listed in Table 3.8-5 (Placer County 1994).

Sacramento County General Plan Noise Element

Sacramento County adopted the standards listed in Table 3.8-6 for non-transportation related noise and its impact on residential areas.

The Sacramento County Noise Element is applicable to new sources of transportation and non-transportation noise. The Proposed Action would not be creating a new source of either transportation- or non-transportation-related noise.

Table 3.8-6. Sacramento County Non-Transportation Noise Standards

Maximum Allowable Exterior Noise Levels					
Daytime 7 a.m. – 7 p.m.		Evening 7 p.m. – 10 p.m.		Nighttime 10 p.m. – 7 a.m.	
Hourly		Hourly		Hourly	
L ₅₀	L _{max}	L ₅₀	L _{max}	L ₅₀	L _{max}
50	70	50	70	45	65

Source: Sacramento County General Plan, Noise Element 1993

City of Folsom Noise Ordinance

The City of Folsom's noise ordinance (Chapter 8.42, Section 8.42.040) establishes exterior noise level standards and interior noise level standards. Tables 3.8-7 and 3.8-8 list these standards.

Table 3.8-7. City of Folsom Exterior Noise Level Standards, dBA

Noise Level Category	Cumulative Number of minutes in any 1-hour time period	dBA Daytime (7 a.m. to 10 p.m.)	dBA Nighttime (10 p.m. to 7 a.m.)
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Source: Folsom Municipal Code

The City of Folsom exempts construction activities provided that construction does not take place before 7 a.m. or after 6 p.m. during weekdays and before 8 a.m. or after 5 p.m. on weekends. For this analysis, effects on noise during construction would be considered significant if construction activities exceed the noise ordinance standards for construction outside of the hours of the hours allowed by the noise ordinance. Maximum noise levels not to be exceeded are 70 dBA before 10 p.m. and 65 dBA after 10 p.m.

Table 3.8-8. City of Folsom Interior Noise Level Standards, dBA

Noise Level Category	Cumulative Number of minutes in any 1-hour period	dBA Daytime (7 a.m. to 10 p.m.)	dBA Nighttime (10 p.m. to 7 a.m.)
1	5	45	35
2	1	50	40
3	0	55	45

Source: Folsom Municipal Code

Vibration

In association with noise levels and analysis of the impacts of construction noise, ground vibration can have a significant effect on persons and fragile buildings. Construction activities have the potential to produce vibration levels that may be annoying or disturbing to humans and may cause damage to structures. Vibration from construction projects is caused by general equipment operations, and is usually highest during pile driving, soil compacting, jack hammering, and construction related demolition and blasting activities. For the Proposed Action, activities that would cause vibration include, earthmoving activities, jack hammering, compaction, and construction related demolition activities.

Measurements of vibration are expressed in terms of the peak particle velocity (PPV) in the unit of inches per second. The PPV is the maximum velocity experienced by any point in a structure during a vibration event. It is an indication of the magnitude of energy transmitted through vibration. PPV is an indicator often used in determining potential damage to buildings from stress associated with blasting and other construction activities.

Table 3.8-9 summarizes the levels of vibration and the usual effect on people and buildings based on the U.S. Department of Transportation guidelines for vibration levels from construction-related activities.

Table 3.8-9. Summary of Vibration Levels and Effects on Humans and Buildings

Peak Particle Velocity (in/sec)	Effects on Humans	Effects on Buildings
Less than 0.005	Imperceptible	No effect on buildings
0.005 to 0.015	Barely perceptible	No effect on buildings
0.02 to 0.05	Level at which continuous vibrations begin to annoy people in buildings	No effect on buildings
0.1 to 0.5	Vibrations considered unacceptable for people exposed to continuous or long-term vibration	Minimal potential for damage to weak or sensitive structures
0.5 to 1.0	Vibrations considered bothersome by most people, however tolerable if short-term in length	Threshold at which there is a risk of architectural damage to buildings with plastered ceilings and walls. Some risk to ancient monuments and ruins.
1.0 to 2.0	Vibrations considered unpleasant by most people	U.S. Bureau of Mines data indicates that blasting vibration in this range will not harm most buildings. Most

Table 3.8-9. Summary of Vibration Levels and Effects on Humans and Buildings

Peak Particle Velocity (in/sec)	Effects on Humans	Effects on Buildings
		construction vibration limits are in this range.
Greater than 3.0	Vibration is unpleasant	Potential for architectural damage and possible minor structural damage.

Source: Michael Minor & Associates 2006

As illustrated in the table, the threshold of human perception is approximately 0.005 in/sec PPV, and the threshold amplitude at which annoyance can occur is approximately 0.02 to 0.05 in/sec PPV. The lower threshold of 0.005 in/sec is considered appropriate to evaluate annoyance caused by vibration in residential buildings, and 0.05 in/sec PPV is considered appropriate to evaluate vibration in commercial or office buildings.

3.8.2 Affected Environment

This section contains a description of the affected environment within the CCAO BRP construction area and along potentially affected roadways. The section also provides an explanation of noise descriptors, to provide the reader with an understanding of the basic noise concepts and terminology reflected in this analysis.

3.8.2.1 Noise Descriptors

There are many factors that affect one's perception of noise. These factors include pitch, loudness, and the character of the noise. The standard unit of sound amplitude measurement is the decibel (dB). Since the human ear cannot hear all frequencies, a special scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) de-emphasizes the low and high end frequencies and emphasizes those frequencies the human ear is able to hear.

The A-weighted dB scale (dBA) is the most widely used composite scale for environmental noise assessments. It is widely accepted that a 3 dBA change in sound level is barely detectable by human hearing.

Noise analyses and some regulations also use the following terms:

- L_{eq}: Equivalent energy level, A-weighted sound level corresponding to a steady-state sound level that contains the same total energy as a varying signal over a given sample period. This is typically computed over 1, 8, and 24 hour sample periods.

- L_{dn}: Day-night average level, an indicator consisting of a 24-hour average L_{eq}, with the addition of 10dBA added to the sound levels from 10:00 p.m. to 7:00 a.m., to account for heightened nighttime noise sensitivity.
- L_{max}: Maximum Noise Levels, representing the highest sound level measured for a given period.
- L₉₀ and L₁₀: Statistical Noise Levels, L₉₀ is close to the lowest sound level observed during the measurement period. It is essentially the same as the residual sound level, which is the lowest sound level observed when there are no obvious nearby intermittent sources. L₁₀ is close to the maximum sound level observed during the measurement period. It is sometimes called the intrusive noise level because it is caused by occasional louder noises like passing motor vehicles.
- CNEL: Community Noise Equivalent Level, a 24-hour average L_{eq}, that includes the addition of five dBA to sound levels from 7:00 p.m. to 10:00 p.m. and an addition of 10 dBA to sound levels from 10:00 p.m. to 7:00 a.m.

3.8.2.2 Area of Analysis

The Folsom Reservoir area is a unique land use and noise setting. The southern end of the reservoir is more of an urban locale with noise generated from the Folsom Prison shooting range and traffic along busy arterial roadways. The area of analysis transitions to a more rural character heading to the north of the reservoir where there is less human activity. Therefore, background noise levels are higher at the southern end of Folsom Reservoir and trend lower as one heads north on both sides of the reservoir. In addition, there are seasonal variations with the reservoir being an active site for recreational boating and jet and water skis activities during the summer, which tends to increase background noise levels. During the winter months, human and recreational activity is less; therefore, background noise levels tend to be lower (Reclamation 2006). However, in the immediate area of the project site, traffic noise along Auburn-Folsom Road is a major source of noise.

The noise analysis focuses on noise-sensitive receptors adjacent to the proposed construction site. Noise impacts associated with trucks hauling construction materials focus on noise-sensitive land uses along both local and regional roadways.

Regional roadways refer to potential routes for trucking soil and construction materials to the construction site. Regional routes potentially used by workers coming to the site are also included here. From the north, these routes include Interstate 80 to Douglas Boulevard to Auburn-Folsom Road. From the south, these routes include Interstate 5 and US-50 east to Folsom Boulevard to Folsom-Auburn Road.

Local roadways refer to roads in the vicinity of Folsom Dam that may be used for trucks hauling materials to and from the site, as well as workers traveling to and from the site during construction. Local haul routes (described in detail in Section 3.7, Transportation and Circulation) include the portion of Auburn-Folsom Road between Greenback Lane and Douglas Boulevard.

Noise-sensitive receptors and existing ambient noise levels are described in detail in Section 3.8.2.3 below.

3.8.2.3 Existing Noise Levels

Data provided in the USEPA Levels Document was used to define average ambient daytime and nighttime L_{eq} and L_{dn} noise conditions around the study site. The L_{dn} noise levels are based on the various land use descriptors. The daytime and nighttime L_{eq} noise levels were estimated based on the L_{dn} noise levels (Reclamation 2006). According to the USEPA, there is typically a 10-dBA change in noise levels between the daytime and nighttime. Table 3.8-10 presents a summary of the ambient noise levels for various land uses.

Table 3.8-10. Average Ambient Noise Levels for Various Land Uses

Land Use Description	Average L_{dn} (dBA)	Daytime L_{eq} (dBA)	Nighttime L_{eq} (dBA)
Wilderness	35	35	25
Rural Residential	40	40	30
Quiet Suburban Residential	50	50	40
Normal Suburban Residential	55	55	45
Urban Residential	60	60	50
Noisy Urban Residential	65	65	55
Very Noisy Urban Residential	70	70	60

Source: USEPA 1974

The most appropriate land use descriptors and noise levels to describe the study area near Folsom Reservoir range from “rural residential/quiet suburban residential” to “urban residential.”

The Folsom Lake State Resource Area Resource Management Plan (LSA 2003) describes that noise is an issue for visitors to Folsom Lake as well as for neighbors in surrounding residential areas. Under current conditions, existing noise is the result of traffic backups at day use facilities, and from water-based activities on Folsom Lake. Noise from power boats and jet skis on the lake can travel great distances depending on atmospheric conditions and wind direction. “In addition, music coming from boats moored or floating in near shore areas does generate complaints from lakeside neighbors” (LSA 2003). For this analysis, the closest noise-sensitive

receptors were identified from Reclamation's *Folsom Dam Raise/Folsom Bridge Draft Supplemental EIS/EIR* (Corps 2006). Figure 3.8-1 shows the five noise-sensitive receptor sites that are considered in the analysis for the proposed CCAO construction. Existing noise level data comes from field collections conducted for the Folsom Dam Raise/Folsom Bridge document and from traffic counts conducted by Fehr & Peers. All data is from 2005 (Fehr & Peers 2005, as cited in Corps 2006). For the Bridge document, results of traffic counts were used to develop appropriate vehicle compositions (percentages of automobiles, medium trucks, and heavy trucks) for the prediction model. Table 3.8-11 summarizes the existing conditions at each noise-sensitive receptor. Figure 3.8-1 shows the five receptor sites and their location relative to the proposed construction area.

Table 3.8-11. Noise-Sensitive Receptor Sites, Existing Conditions

Receptor Number	Location Description	Closest Distance to construction (feet)	Furthest Distance to construction (feet)	Peak-Hour Noise Level	24-hour Noise Level (CNEL)
1	At Building 700, Unit 707 of Lake Pointe Apartments, approximately 165 feet east of the centerline of Auburn-Folsom Road	460	1,042	62	58
2	North side of Building 800 at Lake Pointe Apartments, approximately 525 feet east of Folsom-Auburn Road centerline	388	933	50	56
3	At east side of Building 1200 of Lake Pointe Apartments, located just south of the existing tennis courts	358	748	50 ¹	54

Source: Corps 2006

¹Based on actual field noise measurements

As shown in Figure 3.8-1, Sites 1, 2, and 3 are residential receptors. Lake Pointe Apartments is a large complex to the south of the proposed construction site. In general, the major source of noise in the study area is motor vehicle traffic on Auburn-Folsom Road. Additional noise sources include local construction activities (from the New Folsom Bridge) and noise from boating and other recreation activities, primarily in the summer.

3.8.3 Environmental Consequences

This section evaluates the potential environmental consequences of construction traffic and construction site-related noise levels resulting from the proposed CCAO BRP. The results are compared to local, State, and Federal criteria discussed above.

The focus of the analysis is on potential temporary noise impacts to local noise receptors resulting from construction activities. The Proposed Action does not involve a change in onsite activities, land uses, equipment, or operations that generate substantial noise. Therefore, the project would not generate a change in long-term off-site noise levels.

Construction activities are expected to begin in October of 2009 and last approximately 27 weeks. Noise impacts (from construction-related traffic and construction equipment) were considered for three main phases of the project construction. These include; mobilization, demolition, and utility relocation; excavation, backfill, site grading, and utilities; and, building erection. During the first 26 days, it is estimated that materials would be hauled to the proposed



construction site, while during the last 108 days, it is estimated that materials would be hauled away from the proposed construction site. Each of these proposed construction stages was analyzed for its potential noise impact on the noise-sensitive receptors identified above.

Noise impacts are evaluated based on the above-cited local noise criteria in the general plans of Placer and Sacramento Counties and the City of Folsom.

3.8.3.1 No Action Alternative

Under the No Action Alternative, the CCAO BRP would not be constructed. There would be no changes in noise from the affected environment; therefore there would be no noise impacts.

3.8.3.2 Proposed Action

Potential sources of noise from the Proposed Action include both onsite construction and transportation-related noise from construction workers. Noise from construction would occur during the anticipated seven month period of construction that includes; mobilization, demolition, and utility relocation; excavation, backfill, site grading, and utilities; and, building erection. The noise sources would be located in areas that are already surrounded by existing sources of noise such as nearby traffic on Auburn-Folsom Road. Exact noise levels at nearby receptors would depend on construction phasing and the specific type of equipment that is used. Although construction noise levels can range from approximately 70 to 97 dBA at 50 to 100 feet from construction activities, these noise levels would be intermittent and temporary in nature.

Based on the short-term nature of this project, a qualitative evaluation of potential construction noise impacts was performed using the projected construction activities and schedule. Each construction phase would have the potential to generate short-term noise impacts. Typically, excavation activities, involving the use of excavators, backhoes, scrapers, and dump trucks tend to generate the highest noise levels. It is anticipated that these types of noise-producing construction activities would occur for approximately 7 months during the construction period.

Table 3.8-11 shows that the closest distance to construction, 358 feet, would occur at noise-sensitive receptor site 3. The furthest distance from construction would occur at noise-sensitive receptor site 1. The closest distance to construction represents the worst case scenario when construction activities would be taking place at the southwestern edge of the project footprint. The furthest distance from construction represents the mid-case scenario when construction activities would be taking place in the middle of the proposed construction footprint.

The midpoint noise-sensitive receptor sites are over 1,000 feet from the proposed construction site. Since noise levels decrease by 6 dBA every doubling of distance, peak construction noise at the closest receptor at sites 2 and 3 would range between 40 dBA to 77 dBA. These levels are similar to the existing ambient levels at the three noise-sensitive receptor sites described in Section 3.8.2. To minimize potential noise impacts, all construction work would occur during the daytime (7 a.m. to 5 p.m.) when background noise levels are higher, whenever feasible. Additionally, all construction equipment would be equipped with exhaust mufflers and regularly maintained to minimize engine noise. Overall construction noise is expected to be minimal.

According to the traffic analysis in Section 3.7, the volume of traffic generated from construction equipment and worker commutes, as well as operational traffic, would be very low (an addition of approximately 0.2 percent) in relation to existing traffic volumes on Auburn-Folsom Road. Because it takes a doubling of traffic to increase noise levels by 3 dBA, the threshold of detectability, the noise generated by the relatively low volume of traffic would increase noise levels in the project area by considerably less than 3 dBA. Therefore, the project's construction traffic would have imperceptible noise impacts (Caltrans 1998).

3.8.4 Minimization Measures

No Minimization Measures are required.

3.8.5 Cumulative Effects

The projects with the possibility of overlapping with the Proposed Action are listed in Table 3.1-1. Projects with the potential to contribute to noise in the project vicinity include the Folsom Dam Safety and Flood Damage Reduction Project and the Raw Water Pipeline Bypass Project. As described above, the Proposed Action would have negligible noise impacts in the project vicinity. The Proposed Action would be implemented in close coordination with the lead agencies of projects taking place nearby. No cumulatively considerable noise impacts are expected with implementation of the Proposed Action.

3.9 Cultural Resources

This section presents the affected environment and environmental consequences for cultural resources.

3.9.1 Regulatory Setting

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended through 1992, establishes a program for the preservation of historic properties throughout the

nation. The regulations for following the Section 106 process are found in 36 CFR Part 800. The State Historic Preservation Officer (SHPO) administers the national historic preservation program at the State level, reviews National Register of Historic Places (NRHP) nominations, maintains data on historic properties that have been identified but not yet nominated, and provides consultation for Federal agencies during NHPA Section 106 review. As the NEPA Lead Agency, Reclamation is responsible for compliance with Section 106 of the NRHP and must take into account the effects of its undertaking on historic properties as defined in 36 CFR Part 800.16 (1).

National Environmental Policy Act

Under NEPA, (42 USC) Sections 4321-4327, Reclamation is required to consider potential environmental impacts and appropriate mitigation measures for projects with Federal involvement.

Reclamation Directives and Guidelines

Project undertakings by Reclamation must follow directives and guidelines found in Reclamation Manuals LND P01, LND 02-01, LND 10-07, and LND 07-01. LND P01 establishes policy and authority for cultural resource identification, evaluation and management of cultural resources. LND 02-01 provides directives and standards and clarifies the role of Reclamation regarding implementation of its cultural resources management responsibilities. LND 10-01 provides procedures for inadvertent discoveries of human remains on Reclamation lands. LND 07-01 provides procedures for inadvertent discoveries of cultural items that are under the authority of the Native American Graves Protection and Repatriation Act (NAGPRA).

3.9.2 Affected Environment

Cultural resource is a broad term that is intended to include prehistoric, historic, and traditional cultural properties. Cultural resources eligible for listing on the National Register are known as historic properties. The project area is known to have a variety of cultural resources, both of an archaeological and architectural nature. The cultural resources present in the area include evidence of prehistoric use as well as historic use. Within the project area, there are fifteen cultural resources that will be affected by the Proposed Action, all located within the CCAO Headquarters complex at the base of Folsom Dam.

3.9.3 Environmental Consequences

This section presents the environmental consequences of the Proposed Action and the No Action Alternative.

3.9.3.1 No Action Alternative

Under the No-Action Alternative, the buildings at the CCAO Headquarters would not be removed and the new Maintenance Center and Administration Building would not be constructed. Under this alternative there would be no undertaking as defined by Section 301 of the NHPA and there would be no need to comply with Section 106 of the NHPA. The No Action Alternative would not affect cultural resources.

3.9.3.2 Proposed Action

The removal of fifteen buildings at the CCAO Headquarters and the construction of two new buildings is defined as an undertaking by Section 301 of the NHPA. The removal process and new construction activities are considered types of activities that have the potential to affect cultural resources, which initiates the Section 106 process. Reclamation conducted a literature review of previous reports and found that all the known cultural resources within project's area of potential effect (APE) were previously evaluated for the National Register or have not yet reached the age of consideration as a historic property. Reclamation sent a Section 106 consultation letter to the California SHPO on December 22, 2008, identifying the fifteen cultural resources within the APE and evaluating them for the National Register. Reclamation determined that none of the resources were eligible for the National Register. Reclamation is currently awaiting SHPO concurrence and expects to receive it prior to signing the FONSI. There will be no affect to cultural resources as a result of the Proposed Action being implemented.

The area around Folsom Dam has been heavily modified from its original landscape. The construction of the Folsom Dam and the CCAO Headquarters has impacted archaeological resources while creating other cultural resources like the buildings and dam itself. Due to the multiple archaeological and architectural surveys in the vicinity of the APE, it is unlikely that any unknown cultural resources are present. Earth moving activities and other construction actions implemented as part of the Proposed Action would not be expected to affect any unknown or previously undiscovered cultural resources.

3.9.4 Minimization Measures

No minimization measures are required.

3.9.5 Cumulative Effects

The Proposed Action would not affect any known cultural resources and would be highly unlikely to uncover any previously unknown cultural resources; therefore there would be no cumulative effects.

3.10 Public Services and Utilities

This section presents the affected environment and environmental consequences for public services and utilities.

3.10.1 Regulatory Setting

Solid Waste

Under the jurisdiction of the California Environmental Protection Agency (California EPA), the California Integrated Waste Management Board is charged with managing solid waste. Title 14, Chapter 3, of the California Code of Regulations, addresses minimum standards for solid waste handling and disposal.

3.10.2 Affected Environment

Utilities

Water and sewer lines for the CCAO Headquarters are connected to the City of Folsom lines on Auburn Road. Electricity is provided by Sacramento Municipal Utility District (SMUD). Telephone and internet services are provided by SBC fiber-optic cables that use the existing SMUD 12 kV line. Hot water is heated by propane. CMI currently provides solid waste services.

Public Services

Police services for the Folsom Reservoir area are provided through a contract with the Sacramento County Sheriff's Department and by CDPR State Park Rangers. Fire services are provided by

While the majority of the land around Folsom Reservoir is owned by Reclamation, CDPR has an existing agreement with Reclamation to manage the recreation facilities at the Folsom Lake State Recreation Area and Lake Natoma. CDPR is generally responsible for maintenance of the recreation facilities, trails, roads, and parking lots surrounding Folsom Reservoir. Reclamation is responsible for all facilities at CCAO Headquarters as this area is not open to the public for recreation.

3.10.3 Environmental Consequences

This section presents the environmental consequences of the Proposed Action and the No Action Alternative.

3.10.3.1 No Action Alternative

Under the No Action Alternative, the CCAO BRP would not be implemented. No construction activities would occur. There would be no impacts to existing public services or utilities.

3.10.3.2 Proposed Action

There would be no affects to existing public services from the Proposed Action. Construction and operation of the new CCAO facilities would not affect CDPR or recreation at Folsom Lake State Recreation Area. The construction contractor would be responsible for providing security throughout construction. The construction contractor would also be responsible for implementing a Fire Management Plan to

help prevent accidental fires. There would be no impacts to public services from the Proposed Action.

Construction for the Proposed Action would require excavation and grading. These earth-moving activities have the potential to damage buried utilities and could result in interruptions in service or pose health risks to construction workers and CCAO staff in the area. Additionally, some utilities may need to be relocated during construction. For example, a portion of the electrical duct bank would need to be relocated to accommodate the Maintenance Center building. Minimization Measure UT-1, UT-2, and UT-3 would help to reduce or avoid potential impacts to existing utilities during construction activities.

While utility demands for the Proposed Action are currently unavailable, the Proposed Action would not result in an increase in Reclamation staff and is therefore not expected to greatly increase the demand for water, wastewater, electricity, or natural gas. The new buildings would be constructed to meet LEED standards and current Federal building codes. The utilities for the new buildings would tie in to existing utility lines to reduce the need for new infrastructure. Overall, the utility demands for the Proposed Action are expected to be met with existing utility contracts and infrastructure.

Construction and demolition activities may result in the temporary generation of solid waste. All salvageable materials would be recycled and the remaining waste would be disposed of at a licensed landfill with adequate capacity to receive the wastes. Because the number of Reclamation staff would not change under the Proposed Action, no increase in solid waste generation during operation is expected. Solid waste impacts associated with the Proposed Action are expected to be construction-related and therefore temporary and minimal.

3.10.4 Minimization Measures

UT-1: Locate Existing Utilities Prior to Construction

Prior to construction, existing utility providers will be contacted to obtain current information on any utilities in the area. Utilities will be verified using field surveys. All utilities will be marked with white paint or other suitable markings to alert workers of their locations. Hand tools will be used when digging is required in close proximity to any buried utilities.

UT-2: Emergency Action Plan for Accidental Damage to Utilities

The construction contractor will be required to develop and implement an emergency action plan that will address accidental damage to utilities during construction. This plan will outline contact information to notify the appropriate authorities, directions to the nearest hospital in case of injuries, and a procedure to alert CCAO staff, CDPR staff, local residences and nearby schools in the event that an evacuation becomes necessary.

UT-3: Alert Appropriate Entities of Interruptions in Service

The construction contractor will be required to alert Reclamation and any other applicable entities of any interruptions to existing water, sewer, gas, electricity, or phone services expected to last longer than an hour. All attempts will be made to minimize interruptions in service during construction.

3.10.5 Cumulative Effects

There are no other projects that would affect services or utilities in the project area; therefore there would be no cumulative impacts associated with public services and utilities.

3.11 Public Health and Safety

This section presents the affected environment and environmental consequences for public health and safety, primarily the risks posed by hazardous, toxic, and radiological wastes and fires and the risk to CCAO personnel and visitors.

3.11.1 Regulatory Setting

3.11.1.1 Hazardous, Toxic, and Radiological Wastes

Federal Regulations

Hazardous materials, hazardous substances, and hazardous wastes are regulated under various Federal laws including:

- Resource Conservation and Recovery Act (RCRA, 42 United States Code 692);
- Superfund Amendment Reauthorization Act Title 3 (SARA);
- Hazardous Material Transportation Act (HMTA);
- CWA;
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA, 43 United States Code 9601);
- 40 CFR 260-279 Federal Regulations on hazardous waste management;
- 40 CFR, Section 301 et seq. Emergency Planning and Community Right to Know Act; and
- Toxic Substances Control Act (15 United States Code 2601).

Under RCRA, USEPA regulates the generation, transportation, and disposal of hazardous wastes. The USEPA requires permits for the treatment, storage, and/or disposal of hazardous wastes and tracks the wastes from generation through to

disposal. The USEPA delegates some of this authority, such as permitting, to individual states.

The Department of Transportation through the HMTA regulates transportation of hazardous materials. Transporting hazardous materials requires special handling, packaging, placarding, and manifesting of cargoes. Various laws, including the SARA and HMTA, govern day-to-day management of hazardous materials. These laws define the requirements for storage of hazardous materials, safe handling practices, and employee training.

State Regulations

California State laws that regulate activities involving hazardous materials, hazardous substances, or hazardous waste include:

- Hazardous Waste Control Law (California Health and Safety Code section 25100);
- Title 17, Public Health (California Code of Regulations);
- Title 19, Public Safety (California Code of Regulations);
- Title 22, Division 4.5 - Environmental Health Standards for the Management of Hazardous Waste (California Code of Regulations);
- Title 26, Toxics (California Code of Regulations); and
- California Department of Motor Vehicles, Hazardous Waste and Materials Transportation Requirements (Vehicle Code Section 31303).

The California Department of Toxic Substances Control (DTSC) administers the Federal RCRA for the State, and enforces the California Health and Safety Code. According to the California Government Code (Section 65962.5), DTSC is required to compile and update lists of hazardous materials sites, including land designated as hazardous waste sites and hazardous waste disposals on public lands. The California Government Code (Section 65962.5) also requires the State Water Resources Control Board to compile and update hazardous materials site lists, including underground storage tanks for which an unauthorized release report is filed, and solid waste disposal facilities from which there is a migration of hazardous wastes.

Other agencies that enforce hazards or hazardous materials regulations include the California Highway Patrol, the Regional Water Quality Control Boards, and local fire departments.

3.11.2 Affected Environment

3.11.2.1 Hazardous, Toxic, and Radiological Wastes

Hazardous materials are defined by the State of California as:

...any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.¹

Hazardous, toxic, or radioactive materials include, but are not limited to, the following:

- Asbestos;
- Construction and demolition debris;
- Drums;
- Landfills or solid waste disposal sites;
- Pits, ponds, or lagoons;
- Wastewater;
- Fill, dirt, depressions, and mounds;
- Underground storage tanks;
- Wastewater treatment plants;
- Stormwater runoff structures; and
- Transformers that may contain polychlorinated biphenyls (PCBs).

In May 2005, the Corps conducted an environmental site assessment (ENSA) for the Folsom Dam Modification Project. The ENSA included records research, interviews, and field surveys within a 1.5-mile radius of the Folsom Dam. Additionally, a search of DTSC and USEPA databases was conducted in December 2008 to determine if

¹ California Health and Safety Code, Division 20, Chapter 6.95, Section 25501(k)

any new information was available. Both data searches revealed no HTRW sites within the project area.

Various materials that may be considered hazardous are currently stored within the CCAO maintenance buildings for CCAO O&M activities. Additionally, two above-ground fuel tanks are present in the gravel parking lot that is the proposed location for the new Maintenance Center.

3.11.2.2 Fire

During the dry season (summer months), CCAO Headquarters area is at risk for fires. According to the California Fire Alliance Fire Planning and Mapping website the fire threat for the project area ranges from moderate to high.

3.11.2.3 CCAO Employees and Visitors

The CCAO employs approximately 100 personnel and hosts numerous visitors each day. Work at the CCAO facilities ranges from site security and administration to planning and engineering to site maintenance. Onsite buildings include administration and maintenance facilities. The majority of CCAO employees and visitors use the administration building.

3.11.3 Environmental Consequences

This section presents the environmental consequences of the Proposed Action and the No Action Alternative.

3.11.3.1 No Action Alternative

Under the No Action Alternative, no new construction would occur; therefore, there would be no impacts to public health and safety.

3.11.3.2 Proposed Action

Hazardous, Toxic, and Radiological Waste

Construction of the new CCAO facilities would require the temporary use, storage, and transport of hazardous materials for vehicles and equipment. Their use could result in accidental spills at the site. In addition, all earthwork has the potential to uncover hazardous materials in the soil. Additionally, two above ground fuel tanks located in the area for the proposed Maintenance Center would need to be relocated. Moving these tanks could result in accidental fuel spillage at the site. However, with implementation of Minimization Measure PHS-1, impacts as a result of hazardous, toxic, or radiological waste would be reduced.

Due to the age of the existing CCAO facilities, demolition activities could reveal the presence of lead-based paints or materials containing asbestos. Minimization Measures PHS-1 would include measures to implement in the event that these materials are discovered during demolition and removal activities.

Fire Risk

The area surrounding the project consists of oak woodland and grassland. These areas are at risk for fire, especially during the dry season. Construction activities such as welding or those that may result in accidental spills of flammable liquids could further aggravate the risk of fire. However, with the implementation of Minimization Measure PHS-2, the risk to the public from fire would be reduced.

Safety Risk to CCAO Employees and Visitors

CCAO employees and visitors will be working at and adjacent to the project site during construction. There is the potential for individuals to be harmed during construction by contact with construction equipment, construction materials, or unsafe onsite conditions (e.g. excavated areas). However, with the implementation of Minimization Measure PHS-3, the risk to the public would be reduced.

3.11.4 Minimization Measures

The following minimization measures will be incorporated into the project to reduce or avoid the public health and safety impacts discussed above.

PHS-1: Hazardous Materials Management Plan

Prior to initiation of construction activities, the construction contractor will be required to prepare a Hazardous Material Management Plan for review by Reclamation. The purpose of this plan is to have an established plan of action if hazardous materials are encountered during construction and to establish BMPs to reduce the potential for exposure to hazardous wastes. The plan will:

- Define a protocol for proper handling and disposal of hazardous materials if they are encountered during construction or demolition activities;
- Define a protocol for emergency procedures and handling and disposal of hazardous materials if an accidental spill occurs during construction; and
- Establish BMPs to reduce the potential for spills of toxic substances.

Typical BMPs to reduce the potential for spills may include, but are not limited to:

- Having a spill prevention and control plan with a designated supervisor to oversee and enforce proper spill prevention measures;
- Providing spill response and prevention education for employees and subcontractors;
- Stocking appropriate clean-up materials onsite near material storage, unloading and use areas;

- Designating hazardous waste storage areas away from storm drains or watercourses;
- Minimizing production or generation of hazardous materials onsite or substituting chemicals used onsite with less hazardous chemicals;
- Designating areas for construction vehicle and equipment maintenance and fueling with appropriate control measures for runoff and runoff; and
- Arranging for regular hazardous waste removal to minimize onsite storage.

PHS-2: Fire Management Plan

Prior to initiating construction activities, the construction contractor will prepare and implement a Fire Management Plan. The plan will include fire prevention and response methods including fire precaution, presuppression, and suppression measures consistent with the policies and standards of Reclamation and the affected jurisdictions.

PHS-3: Worker Health and Safety Plan

Prior to construction, the construction contractor will prepare a Health and Safety Plan that should, at a minimum, identify:

- All contaminants that could be encountered during excavation activities;
- All appropriate worker, public health, and environmental protection equipment and procedures;
- Emergency response procedures;
- Most direct route to a hospital; and
- Site Safety Officer.

The plan will require documentation that all workers have reviewed and signed the plan and will be made available to all CCAO employees and visitors.

Additionally, in order to maintain public safety during all phases of construction, the plan will address:

- Adequate signage regarding the location of construction sites and warning of the presence of construction equipment;
- Fencing of construction staging areas and of construction areas if dangerous conditions exist when construction is not occurring; and

- Temporary walkways (with appropriate markings, barriers, and signs to safely separate pedestrians from vehicular traffic) and detour signage where an existing sidewalk or path will be closed during construction.

3.11.5 Cumulative Effects

Although construction of new CCAO facilities would lead to public health and safety impacts, these impacts would be reduced by minimization measures discussed above. The New Folsom Bridge Project, the Raw Water Pipeline Bypass Project, and the Folsom Dam Safety and Flood Damage Reduction Project would also have the potential to impact public health and safety. Although the projects are occurring concurrently, all will employ minimization measures to reduce public health and safety risks and hazardous materials impacts. Additionally, all agencies involved in these projects will be coordinating schedules and construction routes to avoid conflicts. Because all of the projects will minimize impacts as needed and required, there would be no cumulatively considerable impacts to public health and safety.

3.12 Minimization Measures Incorporated into the Project

Based on the above analysis, the Minimization Measures listed in Table 3.12-1 will be incorporated into the project to reduce or avoid all project-related environmental consequences.

Central California Area Office Building Replacement Project
Environmental Assessment

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
Water Resources		
Storm water run-off from the construction site could result in water quality impacts to adjacent water bodies.	MWM	WQ-1: NPDES Construction Permit and SWPPP The Construction Contractor would be required to obtain a State General Permit for Storm Water Discharges Associated with Construction Activity according to the National Pollutant Discharge Elimination System program. This would entail filing a Notice of Intent with the Central Valley Regional Water Quality Control Board and development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would describe best management practices that would be implemented to contain stormwater runoff on-site and to reduce erosion and sedimentation.
Potential impacts to jurisdictional wetlands and other waters of the U.S.	MWM	WQ-2: Comply with all Clean Water Action Section 404 Requirements, as Appropriate Prior to project construction, Reclamation will comply with all Clean Water Action Section 404 and 401 requirements, as appropriate. If necessary, a General Permit will be obtained from the Corps for impacts to jurisdictional waters of the U.S and a 401 water quality certification will be obtained from the CVRWQCB.
Air Quality		
Exceed daily or annual emissions thresholds of SMAQMD during construction and operation of the project.	M	No Minimization Measures required.
Exceed de minimis thresholds.	M	No Minimization Measures required.
Biological Resources		
Loss of vegetation during construction activities.	MWM	BIO-1: Tree Protection and Re-vegetation In order to minimize direct impacts to trees located within the construction area, tree protection measures would be implemented prior to construction and re-vegetation would occur immediately following construction.

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
		<p>Tree protection measures would reduce impacts to trees during construction and may include the following measures:</p> <ol style="list-style-type: none"> 1. Protective fencing will be installed at the Root Protection Zone of trees that would be directly impacted by construction. The Root Protection Zone is defined as the area within a circle with a radius equal to the greatest distance from the trunk to any overhanging foliage in the tree canopy. Posts will be placed where they will not impact tree roots. 2. No construction staging or disposal of construction materials or byproducts including but not limited to paint, plaster, or chemical solutions will be allowed in the Root Protection Zone. 3. All work conducted in the ground within the Root Protection Zone of any protected tree will be accomplished with hand tools to the extent feasible. 4. "Natural" or pre-construction grade will be maintained in the Root Protection Zone. 5. In areas where the grade around the protected tree will be lowered, some root cutting may be unavoidable. Cuts will be clean and made at right angles to the roots. When practical, roots will be cut back to a branching lateral root. Any necessary root pruning to be conducted by qualified personnel. Cut roots subject to open air conditions longer than a few hours should be covered with burlap and maintained in a moist condition until covered by soil. 6. Root damage and soil compaction caused by heavy equipment traversing the Root Protection Zone in locations where it is unavoidable will be mitigated by applying plywood or mulch in the Root Protection Zone to avoid soil compaction. 7. All pruning will be conducted by a certified arborist or other qualified contractor. <p>Once construction has been completed, re-vegetation will occur to restore vegetated areas disturbed during construction to pre-construction conditions, to the extent feasible. Native plant species used for revegetation will be selected based on existing vegetation in the project area.</p>
Potential impacts to wildlife and vegetation during construction.	MWM	<p>BIO-2: Nesting Migratory Birds, Including Raptors</p> <p>To the extent possible, removal of trees and potential bird breeding habitat in the project area</p>

Central California Area Office Building Replacement Project
Environmental Assessment

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
		would occur between September 1 and January 31, when birds are not expected to be nesting, in order to comply with the Migratory Bird Treaty Act. Prior to any tree removal and construction, a qualified biologist or ornithologist would conduct preconstruction field surveys in and adjacent to the project area for nesting migratory birds, including raptors. Surveys would be conducted during the season immediately preceding tree removal and grading operations when birds are building and defending nests or when young are still in nests and dependent on the parents. If no nests are found during the surveys, tree removal and grading may proceed. If nests are found, construction activities including tree removal shall not be conducted within a buffer zone designated by USFWS or the CDFG around the nest(s) until after the breeding season (February to the end of August).
Potential impacts to wildlife and vegetation during construction.	MWM	BIO-3: Biological Resources Awareness Training Prior to construction, including clearing of vegetation and grading, mandatory training regarding the biological resources present at the Proposed Action site will be provided to all construction personnel. The training will be developed and provided by a qualified biologist familiar with the sensitive species that may occur in the project area and will provide educational information on the natural history of these species, reporting sightings, required mitigation measures to avoid impacts, and penalties for not complying with biological mitigation requirements. All project personnel will be required to receive training before they start working.
Potential impacts to valley elderberry longhorn beetle.	MWM	BIO-4: Elderberry Mitigation The following measures are subject to and contingent upon a Section 7 consultation with the USFWS. Reclamation will implement the following measures proposed in the USFWS 1999 VELB Conservation Guidelines (VELB Guidelines) (USFWS 1999). Where possible, complete avoidance of elderberry shrubs would be enforced. Avoidance measures would include the establishment and maintenance of a 100 foot buffer zone surrounding elderberry shrubs containing stems measuring 1.0 inches or greater in diameter at ground level. The proposed staging area and access roads contain elderberry shrubs that would be within 20 feet of project activities; however, these shrubs are currently exposed to ongoing O&M activities by Reclamation that are similar to the Proposed Action. All elderberry shrubs within 20 feet of construction activities will be flagged or fenced for easy identification.

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
		<p>Construction crews will be briefed on the need to avoid elderberry shrubs and no vehicles will enter within the 20 foot buffer zone.</p> <p>Additionally, the following dust control measures will be implemented:</p> <ul style="list-style-type: none"> • Water or otherwise stabilize the soil prior to ground disturbance; • Cover haul trucks; • Employ speed limits on unpaved roads; • Apply dust suppressants; • Physically stabilize soil with vegetation, gravel, recrushed/recycled asphalt or other forms of physical stabilization; • Reduce number of vehicle trips; • Install one or more grizzlies, gravel pads, and/or wash down pads adjacent to the entrance of a paved public roadway to control carry-out and trackout; • Minimize vegetation clearing; and • Revegetate post-construction. <p>Elderberry shrubs that cannot be avoided would be transplanted if technically feasible. All elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level would be transplanted to a USFWS approved conservation area between November 1 and February 15.</p> <p>Each elderberry shrub with stem measuring 1.0 inch or greater in diameter at ground level that is adversely affected would be compensated with elderberry seedlings or cuttings in accordance with the VELB Guidelines. Elderberry shrubs that cannot be feasibly transplanted will be compensated at a ratio two-times the normal amount. A minimum survival rate of at least 60 percent of the elderberry shrubs would be maintained throughout the monitoring period. If survival drops below this level, additional seedlings would be planted. Stock for plantings would be obtained from local sources.</p>

Central California Area Office Building Replacement Project
Environmental Assessment

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
		Native plants associated with elderberry shrubs at the project area or similar reference sites would be planted in accordance with the VELB Guidelines. A minimum survival rate of at least 60 percent of the associated native plants would be maintained throughout the monitoring period. If survival drops below this level, additional seedlings or cuttings would be planted. Only stock from local sources would be used, unless such stock is not available, per the VELB Guidelines.
Potential impacts to California red-legged frog during construction.	MWM	BIO-5: Conduct California Red-Legged Frog Surveys Prior to project construction, a USFWS-approved biologist would conduct surveys to ensure no California red-legged frogs are present within or near the project area. If any California red-legged frogs are observed within or near the project area, Reclamation will reconsult with USFWS.
Potential impacts to special status birds and bats.	MWM	BIO-6: Conduct Nesting Bird Surveys, Roosting Bat Surveys, and Establish No-Disturbance Buffers, as Appropriate, for Special-Status Species If construction activities must occur during the breeding season for special-status birds and/or bats (February 1–August 31), the following measures will be implemented: If no active nests or roosts are detected during surveys, then no additional minimization measures are required. If special-status birds or bats are found in the construction area or in the adjacent surveyed area, a no-disturbance buffer will be established around the nesting/roosting location to avoid disturbance or destruction of the nest site/roost site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late-June through mid-July). The extent of these buffers will be determined by a wildlife biologist in consultation with the applicable resource agencies (i.e., USFWS and/or CDFG) and will depend on the level of noise or construction disturbance, line of site between the nest/roost and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors will be analyzed and used by a qualified wildlife biologist to assist the USFWS and/or CDFG in making an appropriate decision on buffer distances.

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
Potential impacts to special status plants.	MWM	BIO-7: Conduct Brandagee Clarkia Surveys Prior to project construction, a qualified biologist would conduct surveys to ensure no Brandagee clarkia plants are present within or near the project area.
Geology and Soils		
Loss of topsoil during clearing and grading activities.	M	No Minimization Measures required.
Temporary erosion could occur in construction areas that have been cleared and graded.	MWM	See Minimization Measure WQ-1 under Water Resources.
Potential impacts associated with naturally occurring asbestos.	NI	No Minimization Measures required.
Visual Resources		
Temporary construction-related impacts.	M	No Minimization Measures required.
Permanent alteration to existing visual character of the area.	M	No Minimization Measures required.
Transportation and Circulation		
Traffic impacts to Level of Service (LOS) and average daily trips (ADT) during peak construction.	M	No Minimization Measures required.
Noise		
Temporary noise impacts from construction activities.	M	No Minimization Measures required.
Temporary noise impacts from construction traffic.	M	No Minimization Measures required.
Cultural Resources		
Impacts to known cultural resources within the area of potential affect.	NI	No Minimization Measures required.
Impacts to unknown cultural	NI	No Minimization Measures required.

Central California Area Office Building Replacement Project
Environmental Assessment

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
resources		
Public Services and Utilities		
Impact existing public services.	NI	No Minimization Measures required.
Impact existing buried utilities or require relocation of utilities, the result of which could cause interruptions in services or pose health risks to construction workers and CCAO staff.	MWM	<p>UT-1: Locate Existing Utilities Prior to Construction Prior to construction, existing utility providers will be contacted to obtain current information on any utilities in the area. Utilities will be verified using field surveys. All utilities will be marked with white paint or other suitable markings to alert workers of their locations. Hand tools will be used when digging is required in close proximity to any buried utilities.</p> <p>UT-2: Emergency Action Plan for Accidental Damage to Utilities The construction contractor will be required to develop and implement an emergency action plan that will address accidental damage to utilities during construction. This plan will outline contact information to notify the appropriate authorities, directions to the nearest hospital in case of injuries, and a procedure to alert CCAO staff, CDPR staff, local residences and nearby schools in the event that an evacuation becomes necessary.</p> <p>UT-3: Alert Appropriate Entities of Interruptions in Service The construction contractor will be required to alert Reclamation and any other applicable entities of any interruptions to existing water, wastewater, gas, electricity, or phone services expected to last longer than an hour. All attempts will be made to minimize interruptions in service during construction.</p>
Increase the demand for utilities or services.	M	No Minimization Measures required.
Increase the amount of solid waste generated during construction and operation.	M	No Minimization Measures required.
Public Health and Safety		
Impacts associated with hazardous, toxic, and radiological wastes.		<p>PHS-1: Hazardous Materials Management Plan Prior to initiation of construction activities, the construction contractor will be required to prepare a Hazardous Material Management Plan for review by Reclamation. The purpose of this plan is to</p>

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
		<p>have an established plan of action if hazardous materials are encountered during construction and to establish BMPs to reduce the potential for exposure to hazardous wastes. The plan will:</p> <ul style="list-style-type: none"> Define a protocol for proper handling and disposal of hazardous materials if they are encountered during construction or demolition activities; Define a protocol for emergency procedures and handling and disposal of hazardous materials if an accidental spill occurs during construction; and Establish BMPs to reduce the potential for spills of HTRW. <p>Typical BMPs to reduce the potential for spills may include, but are not limited to:</p> <ul style="list-style-type: none"> Having a spill prevention and control plan with a designated supervisor to oversee and enforce proper spill prevention measures; Providing spill response and prevention education for employees and subcontractors; Stocking appropriate clean-up materials onsite near material storage, unloading and use areas; Designating hazardous waste storage areas away from storm drains or watercourses; Minimizing production or generation of hazardous materials onsite or substituting chemicals used onsite with less hazardous chemicals; Designating areas for construction vehicle and equipment maintenance and fueling with appropriate control measures for runoff and runoff; and Arranging for regular hazardous waste removal to minimize onsite storage.
Increase the risk for fires.	MWM	<p>PHS-2: Fire Management Plan Prior to initiating construction activities, the construction contractor will prepare and implement a Fire Management Plan. The plan will include fire prevention and response methods including fire precaution, presuppression, and suppression measures consistent with the policies and standards of Reclamation and the affected jurisdictions.</p>
Create a safety risk to CCAO employees or visitors during	MWM	<p>PHS-3: Worker Health and Safety Plan Prior to construction, the construction contractor will prepare a Health and Safety Plan that</p>

Central California Area Office Building Replacement Project
Environmental Assessment

Table 3.12-1. Summary of Environmental Consequences and Minimization Measures

M = Minimal Impact - No Minimization Measures Required
MWM = Minimal Impact With Minimization Measures
NI = No Impact
ADT = average daily trips
BMP = best management practices
CCAO = Central California Area Office
CDFG = California Department of Fish and Game

HTRW = hazardous, toxic, and radiological wastes
LOS = Level of Service
SMAQMD = Sacramento Metropolitan Air Quality Management District
SWPPP = Storm Water Pollution Prevention Plan
VELB = valley elderberry longhorn beetle
USFWS = U.S. Fish and Wildlife Service

Environmental Consequence	Significance	Minimization Measure
construction.		<p>should, at a minimum, identify:</p> <ul style="list-style-type: none"> • All contaminants that could be encountered during excavation activities; • All appropriate worker, public health, and environmental protection equipment and procedures; • Emergency response procedures; • Most direct route to a hospital; and • Site Safety Officer. <p>The plan will require documentation that all workers have reviewed and signed the plan and will be made available to all CCAO employees and visitors.</p> <p>Additionally, in order to maintain public safety during all phases of construction, the plan will address:</p> <ul style="list-style-type: none"> • Adequate signage regarding the location of construction sites and warning of the presence of construction equipment; • Fencing of construction staging areas and of construction areas if dangerous conditions exist when construction is not occurring; and • Temporary walkways (with appropriate markings, barriers, and signs to safely separate pedestrians from vehicular traffic) and detour signage where an existing sidewalk or path will be closed during construction.

CDPR = California Department of Parks and Recreation